



# PORTFOLIO PERFORMANCE REVIEW

LOS ANGELES CITY EMPLOYEES'  
RETIREMENT SYSTEM

QUARTER ENDING SEPTEMBER 30, 2021



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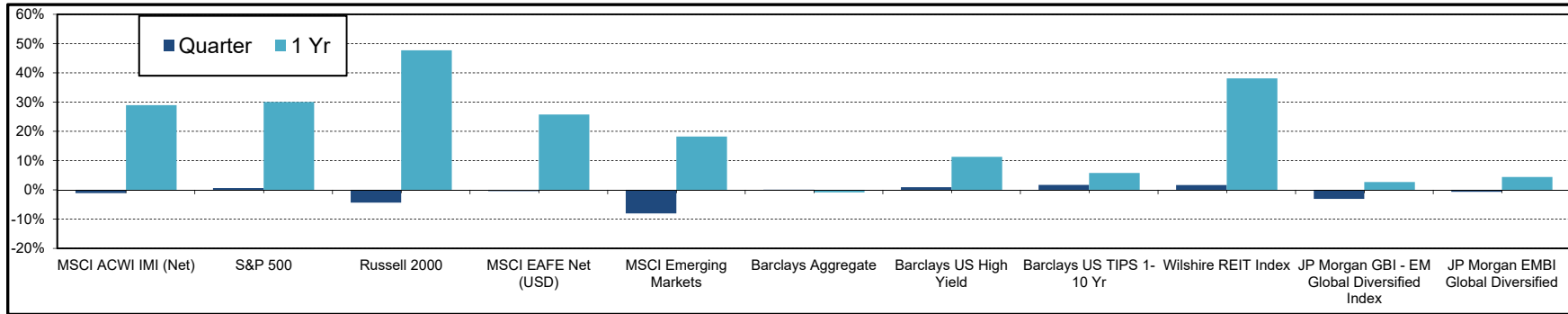


# EXECUTIVE SUMMARY



# PERFORMANCE OVERVIEW

## Q3 Market Summary – Risk Assets Turn In Mixed Results



	Market Value	3 Mo Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs Rank	15 Yrs Rank	Inception	Inception Date							
LACERS Master Trust	\$23,313,360,970	1.47%	34	11.94%	41	23.49%	41	11.18%	38	10.93%	41	10.66%	20	7.57%	37	8.65%	Oct-94
Policy Index		-0.38%	95	8.25%	99	19.98%	83	11.05%	49	10.90%	44	10.50%	34	7.45%	41	8.58%	Oct-94
InvMetrics Public DB \$5-50B Gross Median		1.11%		11.38%		22.28%		11.03%		10.75%		10.20%		7.38%		8.50%	Oct-94

Note: Performance is gross of fees

**Global equities turned in mixed performance for the quarter and closed with a streak of volatility as inflationary pressures fueled concerns around economic growth and tapering of monetary stimulus.**

Non-US Equity and Private Equity composites outperformed their benchmarks due to manager performance

**Fixed-income markets ended the quarter mostly flat despite an uptick in volatility.**

The Core Fixed Income and Credit Fixed Income composites outperformed due to manager performance

**The wide range of outcomes associated with COVID-19 places a greater focus on strategic beliefs.**



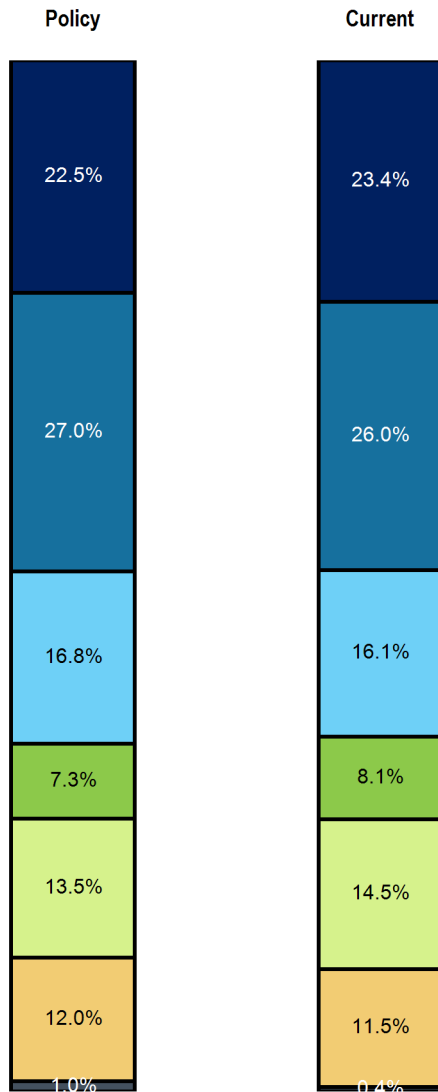


# ASSET CLASS POLICY OVERVIEW



# Los Angeles City Employees' Retirement System

## TOTAL FUND ASSET ALLOCATION VS. POLICY



	Asset Allocation vs. Target					Policy Range	Within Range
	Current	Policy	Current Difference*				
U.S. Equity	\$5,447,216,255	22.50%	23.37%	0.87%	16.50% - 28.50%	Yes	
Non-US Equity	\$6,069,681,623	27.00%	26.04%	-0.96%	21.00% - 33.00%	Yes	
Core Fixed Income	\$3,758,101,505	16.75%	16.12%	-0.63%	13.25% - 20.00%	Yes	
Credit Opportunities	\$1,879,011,306	7.25%	8.06%	0.81%	7.25% - 12.75%	Yes	
Private Equity	\$3,386,441,112	13.50%	14.53%	1.03%	N/A	Yes	
Real Assets	\$2,670,728,919	12.00%	11.46%	-0.54%	N/A	Yes	
Cash	\$102,180,250	1.00%	0.44%	-0.56%	0.00% - 2.00%	Yes	
<b>Total</b>	<b>\$23,313,360,970</b>	<b>100.00%</b>	<b>100.00%</b>				

\*Difference between Policy and Current Allocation

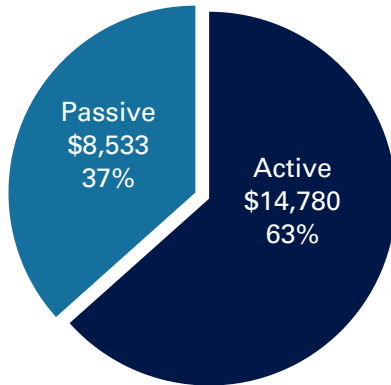
Note: Policy target asset allocation reflects the interim policy allocation adopted on September 14, 2021. See Pages 155 and 156 for policy index definitions and interim policy targets.



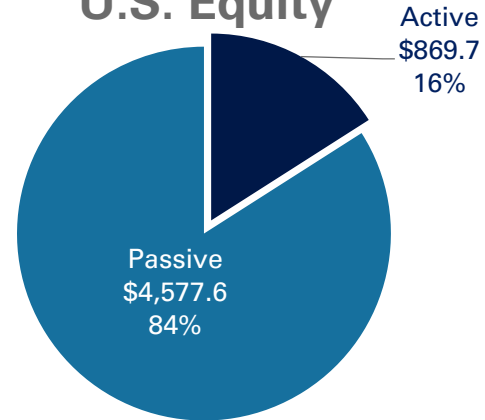
# ACTIVE AND PASSIVE MANAGER BREAKDOWN

Note: Market values shown in millions \$(000).

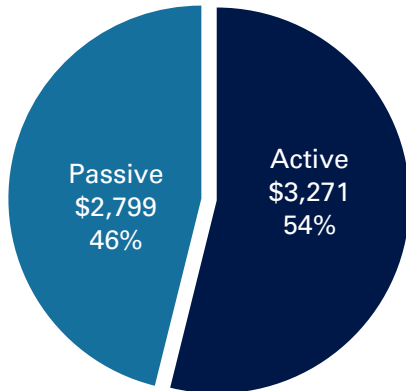
## Total Fund



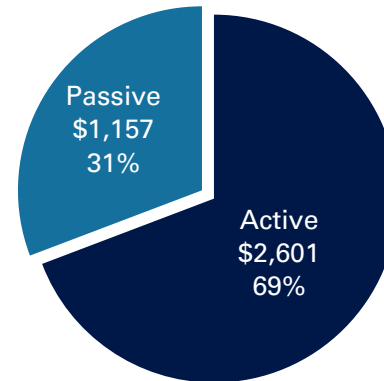
## U.S. Equity



## Non-U.S. Equity



## Core Fixed Income



- LACERS allocated 63% to active managers and 37% to passive managers.
- Credit Opportunities, Private Equity, and Real Assets programs are active and therefore are not shown.





# PERFORMANCE OVERVIEW



# TOTAL FUND PERFORMANCE SUMMARY

## GROSS OF FEES

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	15 Yrs	Rank	Inception	Inception Date
<b>LACERS Master Trust</b>	<b>\$23,313,360,970</b>	<b>1.47%</b>	<b>34</b>	<b>11.94%</b>	<b>41</b>	<b>23.49%</b>	<b>41</b>	<b>11.18%</b>	<b>38</b>	<b>10.93%</b>	<b>41</b>	<b>10.66%</b>	<b>20</b>	<b>7.57%</b>	<b>37</b>	<b>8.65%</b>	<b>Oct-94</b>
Policy Index		-0.38%	95	8.25%	99	19.98%	83	11.05%	49	10.90%	44	10.50%	34	7.45%	41	8.58%	Oct-94
InvMetrics Public DB \$5-50B Gross Median		1.11%		11.38%		22.28%		11.03%		10.75%		10.20%		7.38%		8.50%	Oct-94

Over the past five years the Fund return of 10.93% outperformed the policy index by 0.03%. This return ranks in the 41<sup>st</sup> percentile within the Public Funds \$5 Billion- \$50 Billion universe. The Fund's volatility of 8.83% ranked in the 74<sup>th</sup> percentile over this period. The Fund's risk-adjusted performance, as measured by the Sharpe Ratio ranks in the 70<sup>th</sup> percentile and the Sortino Ratio ranks in the 67<sup>th</sup> percentile. Both measures outperform the benchmark indicating that active management benefited the Plan.

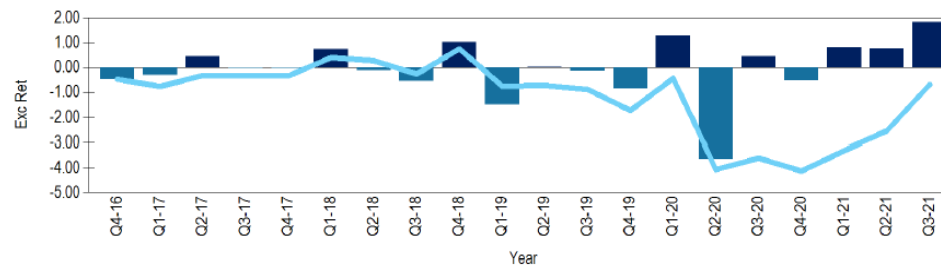
Over the past three years the Fund return of 11.18% outperformed the policy index by 0.13% and ranked in the 38<sup>th</sup> percentile in its peer group. The Fund's volatility ranks in the 75<sup>th</sup> percentile and the Sharpe Ratio of 0.92 ranks in the 72<sup>nd</sup> percentile. The Sortino Ratio of 1.13 ranks in the 67<sup>th</sup> percentile.

In the one-year ended September 30, 2021, assets increased from \$19.23 billion a year ago to \$23.31 billion. The Fund returned 23.49% and outperformed the policy index by 3.51%. The Fund's return above median, 41<sup>st</sup>, in its peer group.

All asset classes were within policy range as of September 30, 2021.

*The InvMetrics Public Funds \$5-\$50 Billion Universe contains 28 observations in the period ending September 30, 2021.*

### Quarterly and Cumulative Excess Performance



5 Years Ending September 30, 2021								
	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	10.93%	41	8.83%	74	1.11	70	1.23	67
Policy Index	10.90%	44	10.01%	99	0.98	94	1.09	81
InvMetrics Public DB \$5-50B Gross Median	10.75%	--	7.86%	--	1.17	--	1.27	--

3 Years Ending September 30, 2021								
	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	11.18%	38	10.97%	75	0.92	72	1.13	67
Policy Index	11.05%	49	12.48%	99	0.80	89	1.01	74
InvMetrics Public DB \$5-50B Gross Median	11.03%	--	9.71%	--	0.99	--	1.22	--

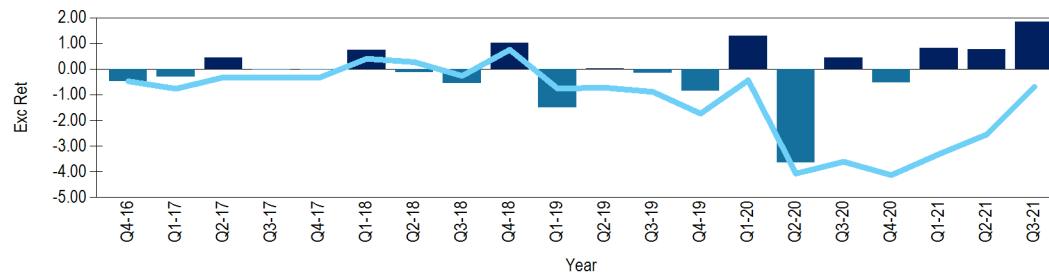


# Los Angeles City Employees' Retirement System

## PERFORMANCE SUMMARY (GROSS) \$1-50B UNIVERSE

	Market Value	3 Mo	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	10 Yrs	Rank	15 Yrs	Rank	Inception	Inception Date
<b>LACERS Master Trust</b>	<b>\$23,313,360,970</b>	<b>1.47%</b>	<b>16</b>	<b>11.94%</b>	<b>22</b>	<b>23.49%</b>	<b>35</b>	<b>11.18%</b>	<b>30</b>	<b>10.93%</b>	<b>33</b>	<b>10.66%</b>	<b>28</b>	<b>7.57%</b>	<b>32</b>	<b>8.65%</b>	<b>Oct-94</b>
Policy Index		-0.38%	82	8.25%	89	19.98%	79	11.05%	34	10.90%	34	10.50%	33	7.45%	39	8.58%	Oct-94
InvMetrics Public DB \$1-50B Gross Median		0.30%		9.89%		21.90%		10.56%		10.35%		10.01%		7.26%		8.24%	Oct-94

### Quarterly and Cumulative Excess Performance



### 5 Years Ending September 30, 2021

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	10.93%	33	8.83%	55	1.11	39	1.23	30
Policy Index	10.90%	34	10.01%	87	0.98	67	1.09	48
InvMetrics Public DB \$1-50B Gross Median	10.35%	--	8.76%	--	1.05	--	1.08	--

### 3 Years Ending September 30, 2021

	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Sharpe Ratio	Rank	Sortino Ratio RF	Rank
LACERS Master Trust	11.18%	30	10.97%	56	0.92	41	1.13	34
Policy Index	11.05%	34	12.48%	87	0.80	66	1.01	43
InvMetrics Public DB \$1-50B Gross Median	10.56%	--	10.82%	--	0.85	--	0.98	--



# Los Angeles City Employees' Retirement System

## TOTAL FUND PERFORMANCE DETAIL (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>LACERS Master Trust</b>	<b>23,313,360,970</b>	<b>100.00</b>	<b>1.47</b>	<b>11.94</b>	<b>23.49</b>	<b>11.18</b>	<b>10.93</b>	<b>10.66</b>	<b>8.32</b>	<b>8.65</b>	<b>Oct-94</b>
Policy Index			<u>-0.38</u>	<u>8.25</u>	<u>19.98</u>	<u>11.05</u>	<u>10.90</u>	<u>10.50</u>	<u>8.00</u>	<u>8.58</u>	<u>Oct-94</u>
Over/Under			1.85	3.69	3.51	0.13	0.03	0.16	0.32	0.07	
<b>U.S. Equity</b>	<b>5,447,216,255</b>	<b>23.37</b>	<b>-0.01</b>	<b>15.44</b>	<b>33.09</b>	<b>15.22</b>	<b>16.48</b>	<b>16.58</b>	<b>10.19</b>	<b>11.27</b>	<b>Oct-94</b>
U.S. Equity Blend			<u>-0.10</u>	<u>14.99</u>	<u>31.87</u>	<u>16.00</u>	<u>16.85</u>	<u>16.60</u>	<u>9.85</u>	<u>10.34</u>	<u>Oct-94</u>
Over/Under			0.09	0.45	1.22	-0.78	-0.37	-0.02	0.34	0.93	
<b>Non-U.S. Equity</b>	<b>6,069,681,623</b>	<b>26.04</b>	<b>-1.19</b>	<b>8.83</b>	<b>28.90</b>	<b>10.40</b>	<b>10.85</b>	<b>9.41</b>	<b>8.32</b>	<b>5.94</b>	<b>Nov-94</b>
MSCI ACWI ex USA			<u>-2.99</u>	<u>5.90</u>	<u>23.91</u>	<u>8.03</u>	<u>8.94</u>	<u>7.48</u>	<u>7.15</u>	<u>5.50</u>	<u>Nov-94</u>
Over/Under			1.80	2.93	4.99	2.37	1.91	1.93	1.17	0.44	
<b>Core Fixed Income</b>	<b>3,758,101,505</b>	<b>16.12</b>	<b>0.13</b>	<b>-1.03</b>	<b>0.13</b>	<b>6.08</b>	<b>3.54</b>	<b>--</b>	<b>--</b>	<b>3.68</b>	<b>Jul-12</b>
Core Fixed Income Blend			<u>0.05</u>	<u>-1.55</u>	<u>-0.90</u>	<u>5.36</u>	<u>2.94</u>	<u>3.19</u>	<u>4.53</u>	<u>2.98</u>	<u>Jul-12</u>
Over/Under			0.08	0.52	1.03	0.72	0.60			0.70	
<b>Credit Opportunities</b>	<b>1,879,011,306</b>	<b>8.06</b>	<b>-0.32</b>	<b>1.00</b>	<b>7.07</b>	<b>5.70</b>	<b>5.29</b>	<b>--</b>	<b>--</b>	<b>5.46</b>	<b>Jun-13</b>
Credit Opportunities Blend			<u>-0.57</u>	<u>1.53</u>	<u>7.84</u>	<u>6.16</u>	<u>5.41</u>	<u>--</u>	<u>--</u>	<u>5.82</u>	<u>Jun-13</u>
Over/Under			0.25	-0.53	-0.77	-0.46	-0.12			-0.36	
<b>Real Assets</b>	<b>2,670,728,919</b>	<b>11.46</b>	<b>1.97</b>	<b>8.83</b>	<b>12.02</b>	<b>6.55</b>	<b>5.79</b>	<b>7.42</b>	<b>5.26</b>	<b>6.33</b>	<b>Nov-94</b>
Real Assets Policy Benchmark			<u>3.16</u>	<u>10.24</u>	<u>11.67</u>	<u>8.27</u>	<u>7.91</u>	<u>7.25</u>	<u>--</u>	<u>--</u>	<u>Nov-94</u>
Over/Under			-1.19	-1.41	0.35	-1.72	-2.12	0.17			
<b>Public Real Assets</b>	<b>1,733,301,828</b>	<b>7.43</b>	<b>1.72</b>	<b>10.23</b>	<b>14.97</b>	<b>8.62</b>	<b>5.36</b>	<b>--</b>	<b>--</b>	<b>3.99</b>	<b>Jun-14</b>
Public Real Assets Blend			<u>1.22</u>	<u>12.89</u>	<u>20.74</u>	<u>7.56</u>	<u>4.76</u>	<u>--</u>	<u>--</u>	<u>2.26</u>	<u>Jun-14</u>
Over/Under			0.50	-2.66	-5.77	1.06	0.60			1.73	
<b>Private Equity</b>	<b>3,386,441,112</b>	<b>14.53</b>	<b>12.22</b>	<b>43.32</b>	<b>56.78</b>	<b>21.72</b>	<b>19.26</b>	<b>14.80</b>	<b>12.18</b>	<b>11.77</b>	<b>Nov-95</b>
Private Equity Blend			<u>0.64</u>	<u>17.53</u>	<u>35.74</u>	<u>19.44</u>	<u>20.31</u>	<u>20.14</u>	<u>13.71</u>	<u>13.98</u>	<u>Nov-95</u>
Over/Under			11.58	25.79	21.04	2.28	-1.05	-5.34	-1.53	-2.21	
<b>Cash</b>	<b>102,180,250</b>	<b>0.44</b>									

- Policy Index = Policy target asset allocation reflects interim asset allocation policy targets adopted on September 14, 2021. 22.5% Russell 3000+ 27% MSCI ACWI ex USA + 16.75% BBgBarc US Aggregate TR+ 7.25% Credit Opportunities Blend+ 12% Real Assets Policy Benchmark+ 13.5% Private Equity Blend+ 1% 91 Day T-Bills
  - U.S. Equity Blend = Russell 3000
  - Core Fixed Income Blend = Bloomberg US AggregateBond Index TR
  - Credit Opportunities Blend = 20.7%Bloomberg US High Yield 2% Issuer Cap TR+ Credit Suisse Leveraged Loan Index 20.7% + 55% Blended emerging Markets Debt Index + 3.6% Credit Suisse Leveraged Loan Index Lagged
  - Real Assets Policy Benchmark = 41.67% Bloomberg US TIPS Index + 25% FTSE NAREIT ALL Equity REIT Index + 33.33% Real Estate Blended Benchmark
  - Public Real Assets Blend = 62.5% Bloomberg US TIPS Index + 37.5% FTSE NAREIT ALL Equity REIT Index
  - Private Equity Blend = Russell 3000 + 300bps
- Please refer to the Appendix and/or investment policy for a full description and composition of blended indices



# Los Angeles City Employees' Retirement System

## TOTAL FUND PERFORMANCE DETAIL (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	20 Yrs (%)	Inception (%)	Inception Date
<b>LACERS Master Trust</b>	<b>23,313,360,970</b>	<b>100.00</b>	<b>1.43</b>	<b>11.82</b>	<b>23.30</b>	<b>11.00</b>	<b>10.74</b>	<b>10.47</b>	<b>8.12</b>	<b>--</b>	<b>Oct-94</b>
<i>Policy Index</i>			<u>-0.38</u>	<u>8.25</u>	<u>19.98</u>	<u>11.05</u>	<u>10.90</u>	<u>10.50</u>	<u>8.00</u>	<u>8.58</u>	<u>Oct-94</u>
Over/Under			1.81	3.57	3.32	-0.05	-0.16	-0.03	0.12		
<b>U.S. Equity</b>	<b>5,447,216,255</b>	<b>23.37</b>	<b>-0.03</b>	<b>15.37</b>	<b>32.99</b>	<b>15.15</b>	<b>16.41</b>	<b>16.45</b>	<b>10.00</b>	<b>--</b>	<b>Oct-94</b>
<i>U.S. Equity Blend</i>			<u>-0.10</u>	<u>14.99</u>	<u>31.87</u>	<u>16.00</u>	<u>16.85</u>	<u>16.60</u>	<u>9.85</u>	<u>10.34</u>	<u>Oct-94</u>
Over/Under			0.07	0.38	1.12	-0.85	-0.44	-0.15	0.15		
<b>Non-U.S. Equity</b>	<b>6,069,681,623</b>	<b>26.04</b>	<b>-1.26</b>	<b>8.57</b>	<b>28.48</b>	<b>10.02</b>	<b>10.45</b>	<b>9.05</b>	<b>7.95</b>	<b>--</b>	<b>Nov-94</b>
<i>MSCI ACWI ex USA</i>			<u>-2.99</u>	<u>5.90</u>	<u>23.91</u>	<u>8.03</u>	<u>8.94</u>	<u>7.48</u>	<u>7.15</u>	<u>5.50</u>	<u>Nov-94</u>
Over/Under			1.73	2.67	4.57	1.99	1.51	1.57	0.80		
<b>Core Fixed Income</b>	<b>3,758,101,505</b>	<b>16.12</b>	<b>0.11</b>	<b>-1.08</b>	<b>0.06</b>	<b>5.98</b>	<b>3.44</b>	<b>--</b>	<b>--</b>	<b>3.56</b>	<b>Jul-12</b>
<i>Core Fixed Income Blend</i>			<u>0.05</u>	<u>-1.55</u>	<u>-0.90</u>	<u>5.36</u>	<u>2.94</u>	<u>3.19</u>	<u>4.53</u>	<u>2.98</u>	<u>Jul-12</u>
Over/Under			0.06	0.47	0.96	0.62	0.50			0.58	
<b>Credit Opportunities</b>	<b>1,879,011,306</b>	<b>8.06</b>	<b>-0.40</b>	<b>0.81</b>	<b>6.80</b>	<b>5.41</b>	<b>4.97</b>	<b>--</b>	<b>--</b>	<b>5.13</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend</i>			<u>-0.57</u>	<u>1.53</u>	<u>7.84</u>	<u>6.16</u>	<u>5.41</u>	<u>--</u>	<u>--</u>	<u>5.82</u>	<u>Jun-13</u>
Over/Under			0.17	-0.72	-1.04	-0.75	-0.44			-0.69	
<b>Real Assets</b>	<b>2,670,728,919</b>	<b>11.46</b>	<b>1.94</b>	<b>8.72</b>	<b>11.87</b>	<b>6.39</b>	<b>5.63</b>	<b>7.27</b>	<b>5.11</b>	<b>--</b>	<b>Nov-94</b>
<i>Real Assets Policy Benchmark</i>			<u>3.16</u>	<u>10.24</u>	<u>11.67</u>	<u>8.27</u>	<u>7.91</u>	<u>7.25</u>	<u>--</u>	<u>--</u>	<u>Nov-94</u>
Over/Under			-1.22	-1.52	0.20	-1.88	-2.28	0.02			
<b>Public Real Assets</b>	<b>1,733,301,828</b>	<b>7.43</b>	<b>1.69</b>	<b>10.09</b>	<b>14.78</b>	<b>8.41</b>	<b>5.13</b>	<b>--</b>	<b>--</b>	<b>3.78</b>	<b>Jun-14</b>
<i>Public Real Assets Blend</i>			<u>1.22</u>	<u>12.89</u>	<u>20.74</u>	<u>7.56</u>	<u>4.76</u>	<u>--</u>	<u>--</u>	<u>2.26</u>	<u>Jun-14</u>
Over/Under			0.47	-2.80	-5.96	0.85	0.37			1.52	
<b>Private Equity</b>	<b>3,386,441,112</b>	<b>14.53</b>	<b>12.22</b>	<b>43.33</b>	<b>56.79</b>	<b>21.73</b>	<b>19.27</b>	<b>14.81</b>	<b>12.11</b>	<b>--</b>	<b>Nov-95</b>
<i>Private Equity Blend</i>			<u>0.64</u>	<u>17.53</u>	<u>35.74</u>	<u>19.44</u>	<u>20.31</u>	<u>20.14</u>	<u>13.71</u>	<u>13.98</u>	<u>Nov-95</u>
Over/Under			11.58	25.80	21.05	2.29	-1.04	-5.33	-1.60		
<b>Cash</b>	<b>102,180,250</b>	<b>0.44</b>									

- Policy Index = Policy target asset allocation reflects interim asset allocation policy targets adopted on September 14, 2021. 22.5% Russell 3000+ 27% MSCI ACWI ex USA + 16.75% BBgBarc US Aggregate TR+ 7.25% Credit Opportunities Blend+ 12% Real Assets Policy Benchmark+ 13.5% Private Equity Blend+ 1% 91 Day T-Bills
  - U.S. Equity Blend = Russell 3000
  - Core Fixed Income Blend = Bloomberg US AggregateBond Index TR
  - Credit Opportunities Blend = 20.7%Bloomberg US High Yield 2% Issuer Cap TR+ Credit Suisse Leveraged Loan Index 20.7% + 55% Blended emerging Markets Debt Index + 3.6% Credit Suisse Leveraged Loan Index Lagged
  - Real Assets Policy Benchmark = 41.67% Bloomberg US TIPS Index + 25% FTSE NAREIT ALL Equity REIT Index + 33.33% Real Estate Blended Benchmark
  - Public Real Assets Blend = 62.5% Bloomberg US TIPS Index + 37.5% FTSE NAREIT ALL Equity REIT Index
  - Private Equity Blend = Russell 3000 + 300bps
- Please refer to the Appendix and/or investment policy for a full description and composition of blended indices



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS (GROSS) \$5-50B UNIVERSE

3 Years Ending September 30, 2021

	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	11.18%	38	10.97%	75	1.44%	44	0.06	66	1.13	67	2.31%	39
Total Equity	49.40%	12.57%	37	18.73%	74	0.19%	29	0.17	29	0.78	50	1.09%	21
U.S. Equity	23.37%	15.22%	38	19.62%	42	-0.72%	45	-0.83	67	0.92	39	0.93%	18
Non-U.S. Equity	26.04%	10.40%	21	18.42%	65	2.13%	24	1.39	9	0.66	24	1.71%	30
Developed ex-U.S.	19.29%	9.84%	40	18.90%	77	1.84%	46	0.98	23	0.63	42	2.27%	32
Emerging Markets	6.75%	11.77%	10	19.25%	51	3.32%	13	1.14	9	0.75	14	2.80%	21
Core Fixed Income	16.12%	6.08%	29	3.57%	17	0.74%	30	1.21	7	3.14	7	0.59%	16
Credit Opportunities	8.06%	5.70%	--	10.77%	--	-0.98%	--	-0.25	--	0.34	--	1.86%	--
Real Assets	11.46%	6.55%	50	4.22%	1	-2.14%	76	-0.44	95	1.57	26	3.92%	4
Public Real Assets	7.43%	8.62%	--	6.74%	--	3.38%	--	0.26	--	1.25	--	4.13%	--
Private Real Estate	3.94%	3.68%	89	2.81%	29	2.13%	15	-0.81	94	1.09	92	5.23%	93
Private Equity	14.53%	21.72%	43	12.02%	43	20.44%	15	0.10	44	2.96	68	22.83%	86

5 Years Ending September 30, 2021

	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	10.93%	41	8.83%	74	1.28%	48	0.01	78	1.23	67	1.85%	35
Total Equity	49.40%	13.39%	30	15.02%	60	0.34%	27	0.36	17	0.91	35	0.93%	15
U.S. Equity	23.37%	16.48%	39	15.83%	36	-0.35%	39	-0.44	52	1.08	34	0.85%	19
Non-U.S. Equity	26.04%	10.85%	22	15.16%	58	1.67%	18	1.25	1	0.81	19	1.53%	25
Developed ex-U.S.	19.29%	10.57%	38	15.38%	72	1.43%	40	0.89	12	0.79	42	1.99%	26
Emerging Markets	6.75%	11.34%	15	16.67%	55	2.18%	15	0.92	1	0.85	18	2.29%	12
Core Fixed Income	16.12%	3.54%	53	3.28%	18	0.64%	45	1.19	9	1.32	6	0.50%	16
Credit Opportunities	8.06%	5.29%	--	8.56%	--	-0.55%	--	-0.08	--	0.40	--	1.51%	--
Real Assets	11.46%	5.79%	47	3.40%	1	-1.74%	88	-0.66	99	1.59	22	3.19%	3
Public Real Assets	7.43%	5.36%	--	5.67%	--	1.83%	--	0.18	--	0.95	--	3.36%	--
Private Real Estate	3.94%	5.61%	87	2.47%	27	4.60%	11	-0.56	92	1.86	85	4.95%	90
Private Equity	14.53%	19.26%	45	9.66%	34	18.01%	16	-0.06	53	2.96	75	18.44%	86



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS (GROSS) \$1-50B UNIVERSE

3 Years Ending September 30, 2021

	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	11.18%	30	10.97%	56	1.44%	24	0.06	66	1.13	34	2.31%	64
Total Equity	49.40%	12.57%	37	18.73%	74	0.19%	29	0.17	29	0.78	50	1.09%	21
U.S. Equity	23.37%	15.22%	38	19.62%	42	-0.72%	45	-0.83	67	0.92	39	0.93%	18
Non-U.S. Equity	26.04%	10.40%	21	18.42%	65	2.13%	24	1.39	9	0.66	24	1.71%	30
Developed ex-U.S.	19.29%	9.84%	40	18.90%	77	1.84%	46	0.98	23	0.63	42	2.27%	32
Emerging Markets	6.75%	11.77%	10	19.25%	51	3.32%	13	1.14	9	0.75	14	2.80%	21
Core Fixed Income	16.12%	6.08%	29	3.57%	17	0.74%	30	1.21	7	3.14	7	0.59%	16
Credit Opportunities	8.06%	5.70%	--	10.77%	--	-0.98%	--	-0.25	--	0.34	--	1.86%	--
Real Assets	11.46%	6.55%	50	4.22%	1	-2.14%	76	-0.44	95	1.57	26	3.92%	4
Public Real Assets	7.43%	8.62%	--	6.74%	--	3.38%	--	0.26	--	1.25	--	4.13%	--
Private Real Estate	3.94%	3.68%	89	2.81%	29	2.13%	15	-0.81	94	1.09	92	5.23%	93
Private Equity	14.53%	21.72%	43	12.02%	43	20.44%	15	0.10	44	2.96	68	22.83%	86

5 Years Ending September 30, 2021

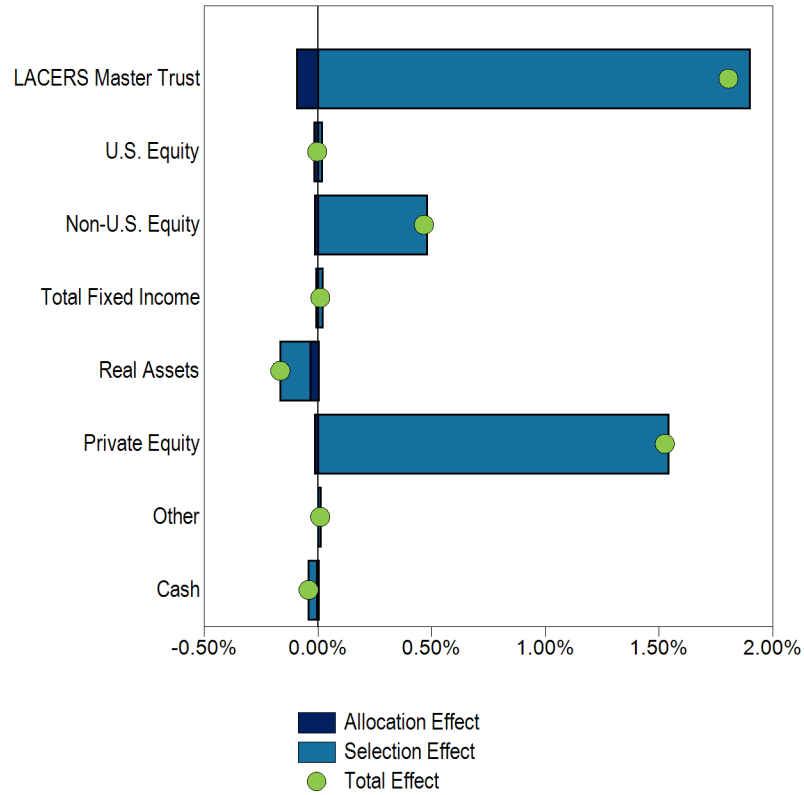
	% of Total MV (%)	Annualized Return (%)	Rank	Annualized Standard Deviation	Rank	Annualized Alpha Jensen (%)	Rank	Information Ratio	Rank	Sortino Ratio RF	Rank	Tracking Error	Rank
LACERS Master Trust	100.00%	10.93%	33	8.83%	55	1.28%	27	0.01	74	1.23	30	1.85%	57
Total Equity	49.40%	13.39%	30	15.02%	60	0.34%	27	0.36	17	0.91	35	0.93%	15
U.S. Equity	23.37%	16.48%	39	15.83%	36	-0.35%	39	-0.44	52	1.08	34	0.85%	19
Non-U.S. Equity	26.04%	10.85%	22	15.16%	58	1.67%	18	1.25	1	0.81	19	1.53%	25
Developed ex-U.S.	19.29%	10.57%	38	15.38%	72	1.43%	40	0.89	12	0.79	42	1.99%	26
Emerging Markets	6.75%	11.34%	15	16.67%	55	2.18%	15	0.92	1	0.85	18	2.29%	12
Core Fixed Income	16.12%	3.54%	53	3.28%	18	0.64%	45	1.19	9	1.32	6	0.50%	16
Credit Opportunities	8.06%	5.29%	--	8.56%	--	-0.55%	--	-0.08	--	0.40	--	1.51%	--
Real Assets	11.46%	5.79%	47	3.40%	1	-1.74%	88	-0.66	99	1.59	22	3.19%	3
Public Real Assets	7.43%	5.36%	--	5.67%	--	1.83%	--	0.18	--	0.95	--	3.36%	--
Private Real Estate	3.94%	5.61%	87	2.47%	27	4.60%	11	-0.56	92	1.86	85	4.95%	90
Private Equity	14.53%	19.26%	45	9.66%	34	18.01%	16	-0.06	53	2.96	75	18.44%	86



# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects 3 Months Ending September 30, 2021



Attribution Summary 3 Months Ending September 30, 2021						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	-0.03%	-0.10%	0.07%	0.01%	-0.01%	0.01%
Non-U.S. Equity	-1.26%	-2.99%	1.72%	0.47%	0.00%	0.47%
Total Fixed Income	-0.06%	-0.14%	0.08%	0.02%	-0.01%	0.01%
Real Assets	1.94%	3.13%	-1.19%	-0.13%	-0.03%	-0.16%
Private Equity	12.22%	0.64%	11.58%	1.54%	-0.02%	1.52%
Other						
Cash	-3.93%	0.01%	-3.94%	-0.03%	-0.01%	-0.04%
<b>Total</b>	<b>1.43%</b>	<b>-0.38%</b>	<b>1.82%</b>	<b>1.89%</b>	<b>-0.07%</b>	<b>1.82%</b>

Wtd. = Weighted

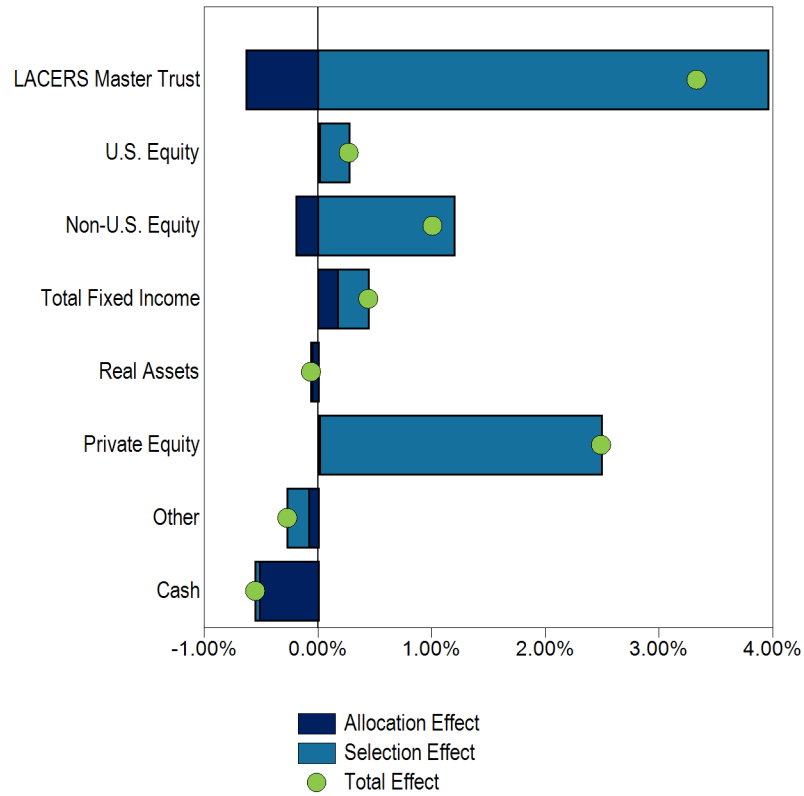
Other composite is comprised of securities lending income, tax reclaims and other miscellaneous transactions.



# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects 1 Year Ending September 30, 2021



Attribution Summary 1 Year Ending September 30, 2021						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	32.99%	31.87%	1.11%	0.25%	0.02%	0.27%
Non-U.S. Equity	28.48%	23.91%	4.57%	1.19%	-0.19%	1.01%
Total Fixed Income	1.80%	0.82%	0.98%	0.27%	0.18%	0.44%
Real Assets	11.87%	11.65%	0.22%	0.00%	-0.06%	-0.06%
Private Equity	56.79%	35.74%	21.05%	2.47%	0.02%	2.49%
Other						
Cash	-3.83%	0.04%	-3.88%	-0.04%	-0.51%	-0.55%
<b>Total</b>	<b>23.31%</b>	<b>19.98%</b>	<b>3.33%</b>	<b>3.96%</b>	<b>-0.63%</b>	<b>3.33%</b>

Wtd. = Weighted

Other composite is comprised of securities lending income, tax reclaims and other miscellaneous transactions.

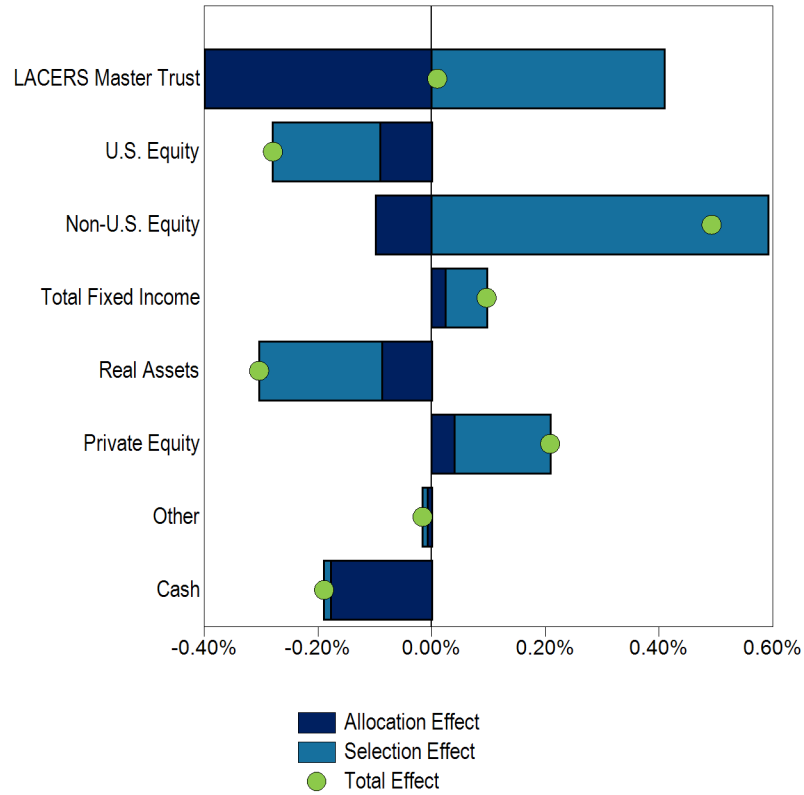




# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects 3 Years Ending September 30, 2021



Attribution Summary 3 Years Ending September 30, 2021						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	15.15%	16.00%	-0.85%	-0.19%	-0.07%	-0.26%
Non-U.S. Equity	10.02%	8.03%	1.99%	0.58%	-0.10%	0.47%
Total Fixed Income	5.93%	5.58%	0.36%	0.07%	0.02%	0.09%
Real Assets	6.39%	8.26%	-1.87%	-0.22%	-0.08%	-0.30%
Private Equity	21.73%	19.44%	2.29%	0.17%	0.04%	0.21%
Other						
Cash	-0.15%	1.04%	-1.19%	-0.01%	-0.18%	-0.19%
<b>Total</b>	<b>11.00%</b>	<b>11.05%</b>	<b>-0.04%</b>	<b>0.36%</b>	<b>-0.40%</b>	<b>-0.04%</b>

Wtd. = Weighted

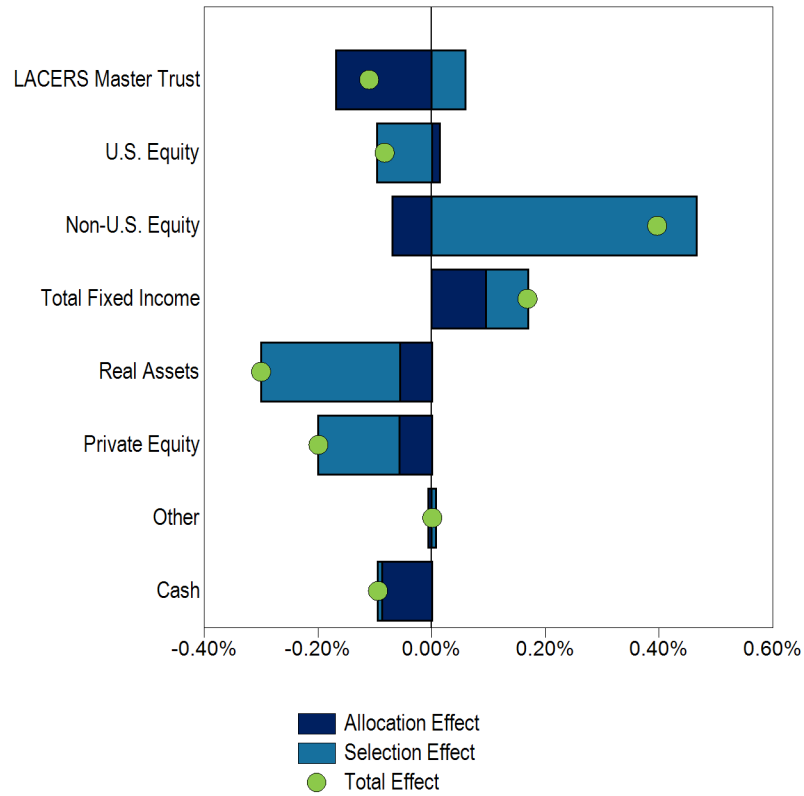
Other composite is comprised of securities lending income, tax reclaims and other miscellaneous transactions.



# Los Angeles City Employees' Retirement System

## TOTAL FUND ATTRIBUTION ANALYSIS (NET)

### Attribution Effects 5 Years Ending September 30, 2021



Attribution Summary 5 Years Ending September 30, 2021						
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Total Effects
U.S. Equity	16.41%	16.85%	-0.44%	-0.10%	0.02%	-0.07%
Non-U.S. Equity	10.45%	8.94%	1.51%	0.46%	-0.07%	0.39%
Total Fixed Income	3.82%	3.49%	0.34%	0.07%	0.09%	0.16%
Real Assets	5.63%	7.90%	-2.27%	-0.24%	-0.05%	-0.30%
Private Equity	19.27%	20.31%	-1.04%	-0.14%	-0.06%	-0.20%
Other						
Cash	0.47%	1.10%	-0.63%	-0.01%	-0.09%	-0.09%
<b>Total</b>	<b>10.75%</b>	<b>10.90%</b>	<b>-0.15%</b>	<b>0.03%</b>	<b>-0.18%</b>	<b>-0.15%</b>

Wtd. = Weighted

Other composite is comprised of securities lending income, tax reclaims and other miscellaneous transactions.



# PRIVATE MARKETS PERFORMANCE

AS OF JUNE 30, 2021

Private Equity	10 Year IRR	Since Inception IRR	Since Inception Multiple
Aggregate Portfolio	14.6%	12.7%	1.77x
Core Portfolio	15.3%	13.2%	1.80x
Specialized Portfolio	3.5%	2.2%	1.15x
Russell 3000 + 300 bps	17.7%	13.1%	N/A

Real Estate	10 Year Return (Net)	Since Inception Return (Net)
Total Portfolio (TWR) <sup>1</sup>	7.98%	5.85%
NFI-ODCE + 80 basis points (TWR)	9.40%	6.98%

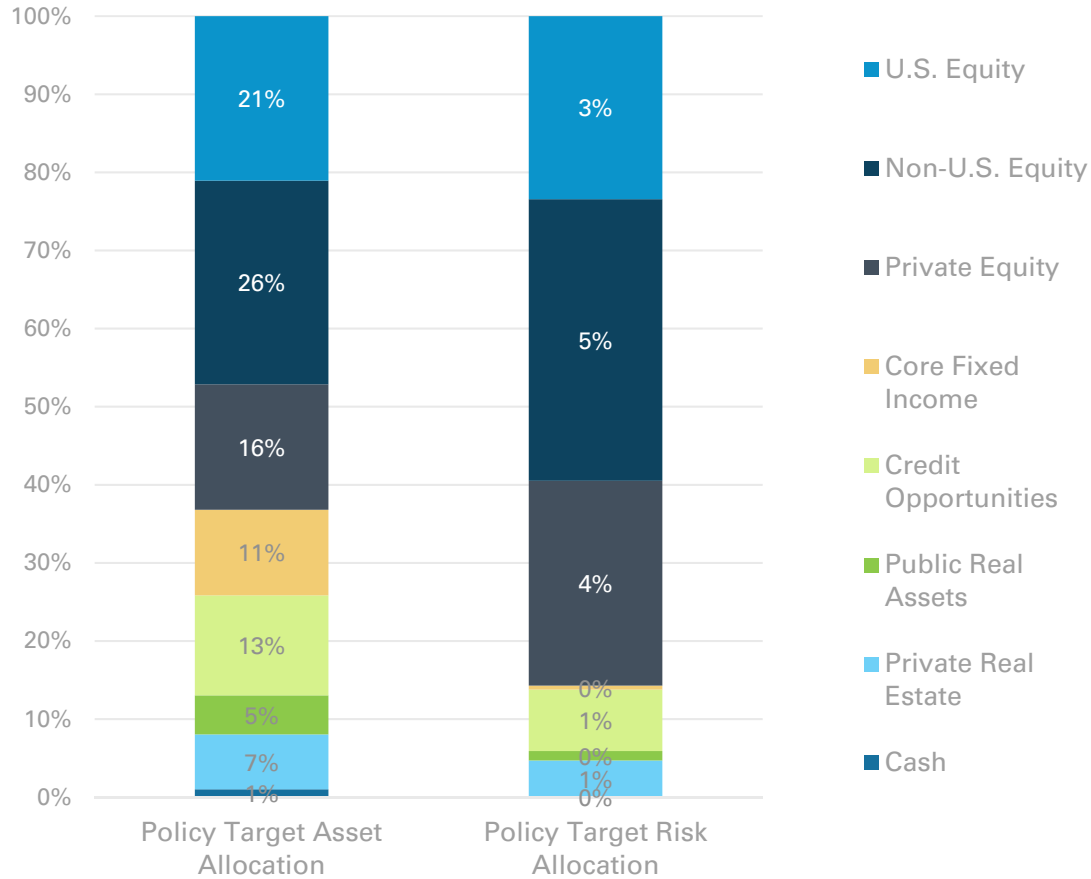
Note: The Total Value to Paid-In Ratio (TVPI) is a multiple that relates the current value of the private equity portfolio plus all distributions received to date with the total amount of capital contributed.

1 - IRR is not available for the Real Estate portfolio and therefore only time weighted returns (TWR) are reported.



# TOTAL FUND RISK ALLOCATION

## ASSET ALLOCATION VS. RISK ALLOCATION



- Public and Private Equity policy target asset allocation is 63%; accounts for 86% of the policy target portfolio risk.
  - Core Fixed Income and Credit Opportunities policy allocation is 24%, accounting for 8% of the policy target portfolio risk.
  - Real Assets (Private Real Estate and Public Real Assets) policy allocation is 12%, accounting for 5% of policy target portfolio risk.
- \* Adopted May 11, 2021



# PUBLIC MARKETS RISK BUDGET COMPARISON

AS OF SEPTEMBER 30, 2021

Public Markets Asset Class	Target Risk Budget	Actual 3 Yr Tracking Error
U.S. Equity	1.25%	0.93%
Non-U.S. Equity	1.75%	1.71%
Core Fixed Income	1.75%	0.60%
Credit Opportunities	3.50%	1.87%
Public Real Assets*	1.25%	4.14%

- Current public market asset class composite tracking error statistics are compared to asset class target risk budgets to ensure active risks are within expectations.
- Risk budgets are to be evaluated over three-year periods, at minimum, to reflect a full market cycle.
- All equity public markets asset classes are within an appropriately narrow range of their respective risk budgets.
- Both Core Fixed Income and Credit Opportunities have exhibited lower than expected active risk.
- The Public Real Assets composite is not at its target strategy allocation.
- Note: The target Risk Budget was approved by the Board on June 22, 2021, and is reflected in the table above. Implementation of the new asset allocation is in progress.

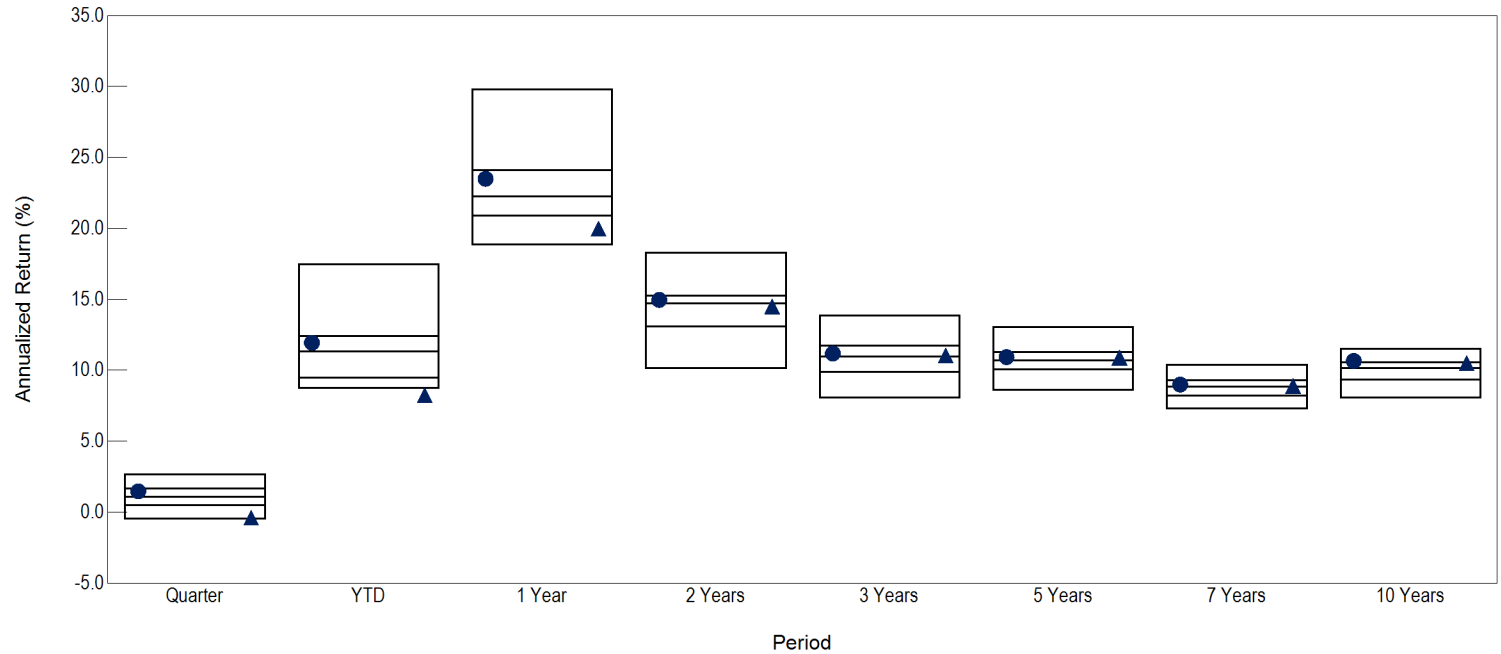
\* The benchmark for the Public Real Assets composite is a custom policy benchmark that is comprised of the target weights of the public real asset components: 62.5% Bloomberg Barclays US TIPS and 37.5% FTSE NAREIT All Equity REIT Index. Historical composition can be found in the investment policy statement.



# Los Angeles City Employees' Retirement System

## TOTAL FUND RETURN SUMMARY VS. \$5-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$5-50B Gross



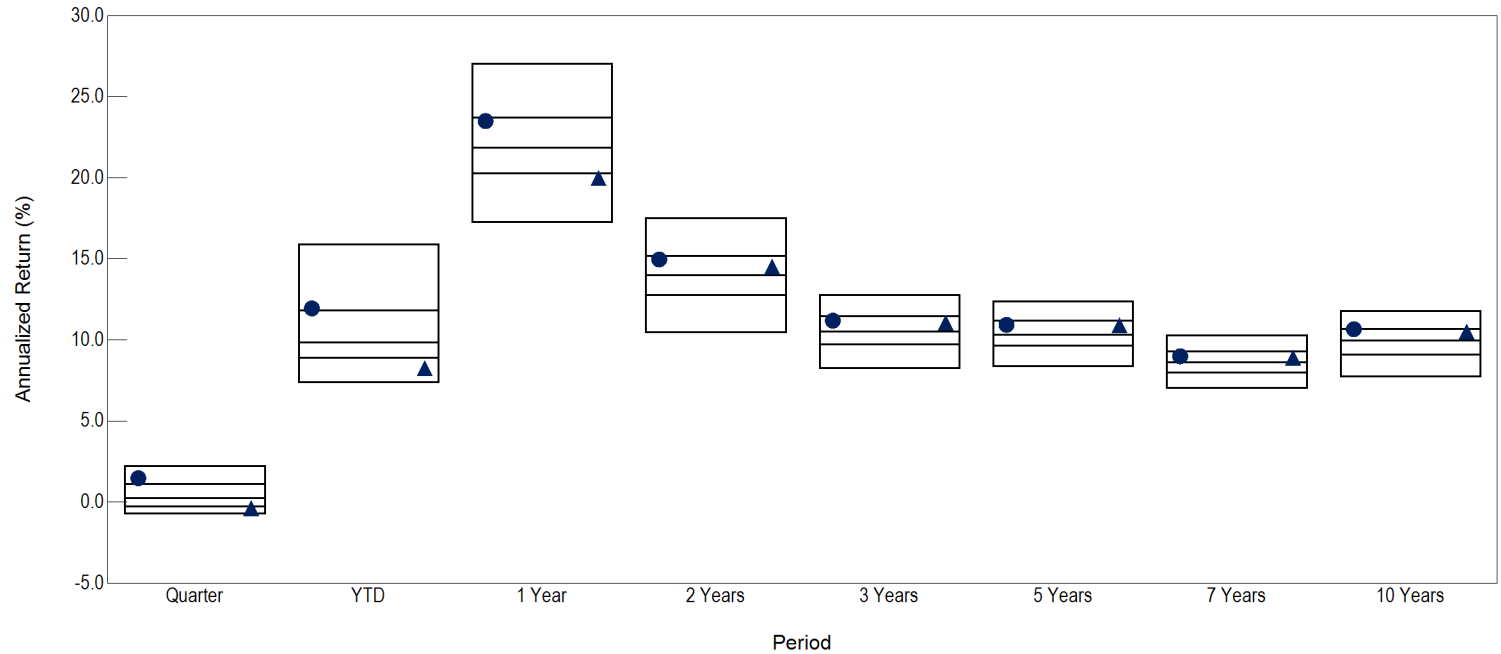
	Return (Rank)															
5th Percentile	2.65	17.46	29.82	18.28	13.85	13.05	10.38	11.49								
25th Percentile	1.70	12.45	24.15	15.31	11.80	11.32	9.34	10.61								
Median	1.11	11.38	22.28	14.75	11.03	10.75	8.91	10.20								
75th Percentile	0.52	9.54	20.95	13.14	9.94	10.11	8.24	9.41								
95th Percentile	-0.43	8.80	18.92	10.20	8.11	8.68	7.36	8.14								
# of Portfolios	28	28	28	28	28	28	27	26								
● LACERS Master Trust	1.47	(34)	11.94	(41)	23.49	(41)	14.96	(34)	11.18	(38)	10.93	(41)	8.99	(47)	10.66	(20)
▲ Policy Index	-0.38	(95)	8.25	(99)	19.98	(83)	14.51	(55)	11.05	(49)	10.90	(44)	8.90	(52)	10.50	(34)



# Los Angeles City Employees' Retirement System

## TOTAL FUND RETURN SUMMARY VS. \$1-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross



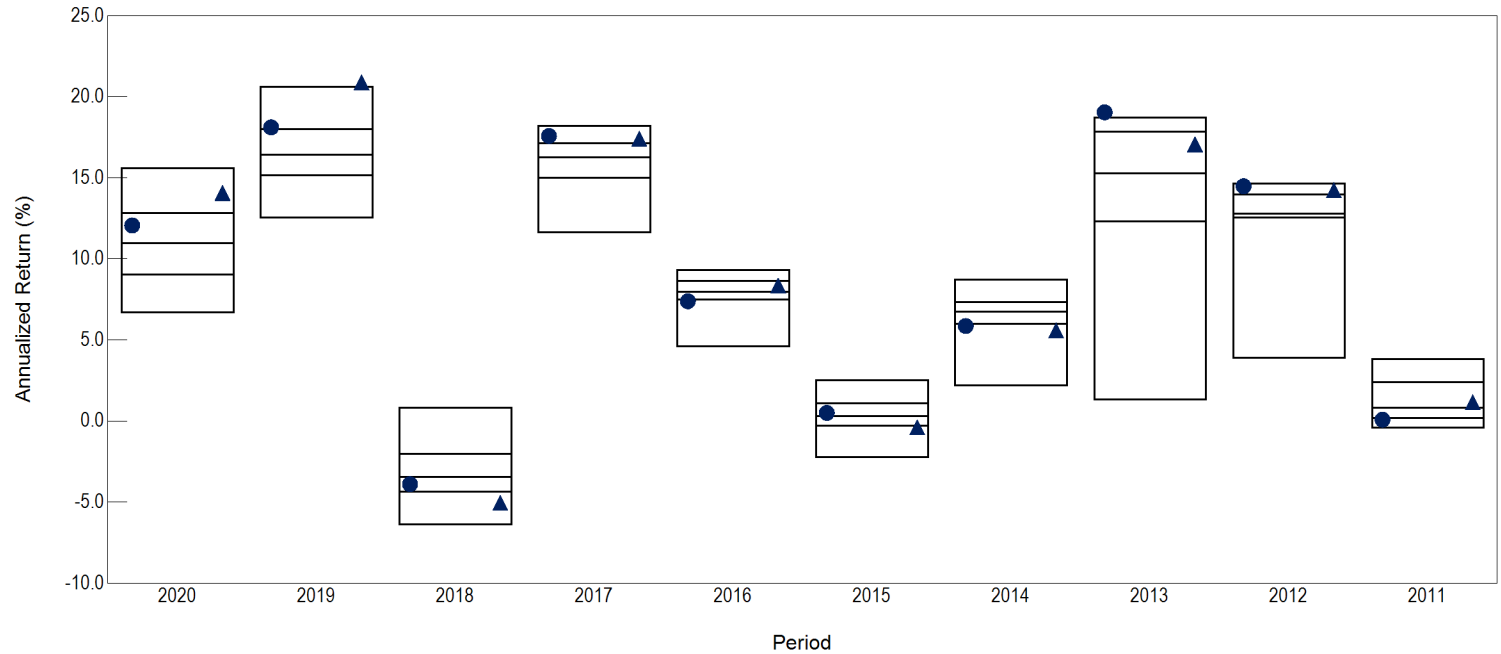
	Return (Rank)															
5th Percentile	2.21	15.90	27.03	17.49	12.77	12.38	10.29	11.77								
25th Percentile	1.14	11.86	23.77	15.21	11.52	11.22	9.31	10.70								
Median	0.30	9.89	21.90	14.05	10.56	10.35	8.65	10.01								
75th Percentile	-0.24	8.95	20.33	12.79	9.75	9.67	8.01	9.14								
95th Percentile	-0.66	7.42	17.30	10.50	8.29	8.44	7.06	7.80								
# of Portfolios	79	79	79	79	79	79	78	75								
● LACERS Master Trust	1.47	(16)	11.94	(22)	23.49	(35)	14.96	(29)	11.18	(30)	10.93	(33)	8.99	(37)	10.66	(28)
▲ Policy Index	-0.38	(82)	8.25	(89)	19.98	(79)	14.51	(41)	11.05	(34)	10.90	(34)	8.90	(39)	10.50	(33)



# Los Angeles City Employees' Retirement System

## TOTAL FUND RETURN SUMMARY VS. \$5-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$5-50B Gross



	Return (Rank)															
	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011						
5th Percentile	15.58	20.62	0.81	18.21	9.30	2.50	8.72	18.69	14.65	3.83						
25th Percentile	12.88	18.02	-1.99	17.15	8.68	1.12	7.38	17.86	14.01	2.41						
Median	11.01	16.46	-3.40	16.29	7.99	0.35	6.79	15.31	12.83	0.86						
75th Percentile	9.06	15.18	-4.32	15.05	7.51	-0.24	6.04	12.36	12.58	0.21						
95th Percentile	6.73	12.57	-6.33	11.68	4.65	-2.20	2.25	1.36	3.92	-0.37						
# of Portfolios	32	27	25	46	30	24	24	23	16	16						
● LACERS Master Trust	12.05 (44)	18.10 (23)	-3.89 (67)	17.57 (12)	7.38 (78)	0.49 (41)	5.85 (81)	19.03 (4)	14.47 (7)	0.08 (89)						
▲ Policy Index	14.06 (19)	20.88 (5)	-5.04 (84)	17.41 (14)	8.35 (41)	-0.39 (77)	5.58 (87)	17.06 (31)	14.23 (21)	1.17 (44)						

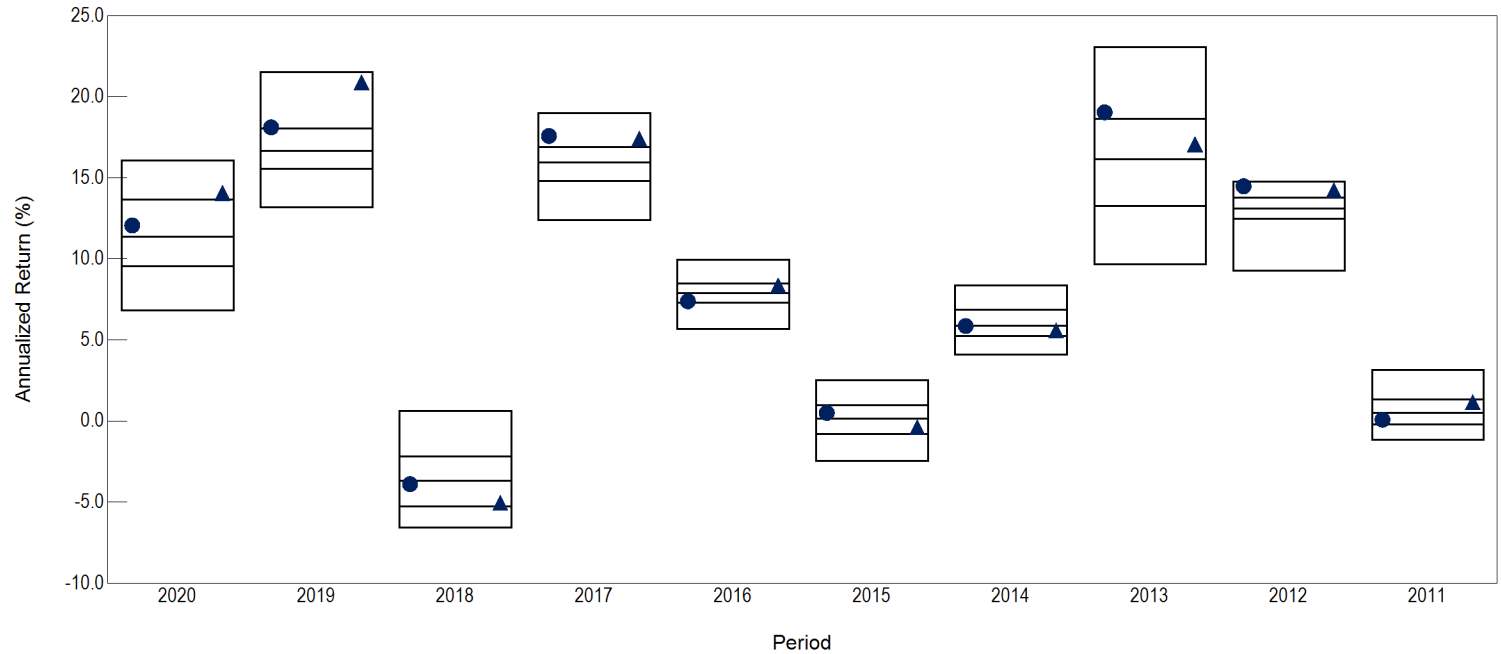




# Los Angeles City Employees' Retirement System

## TOTAL FUND RETURN SUMMARY VS. \$1-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross



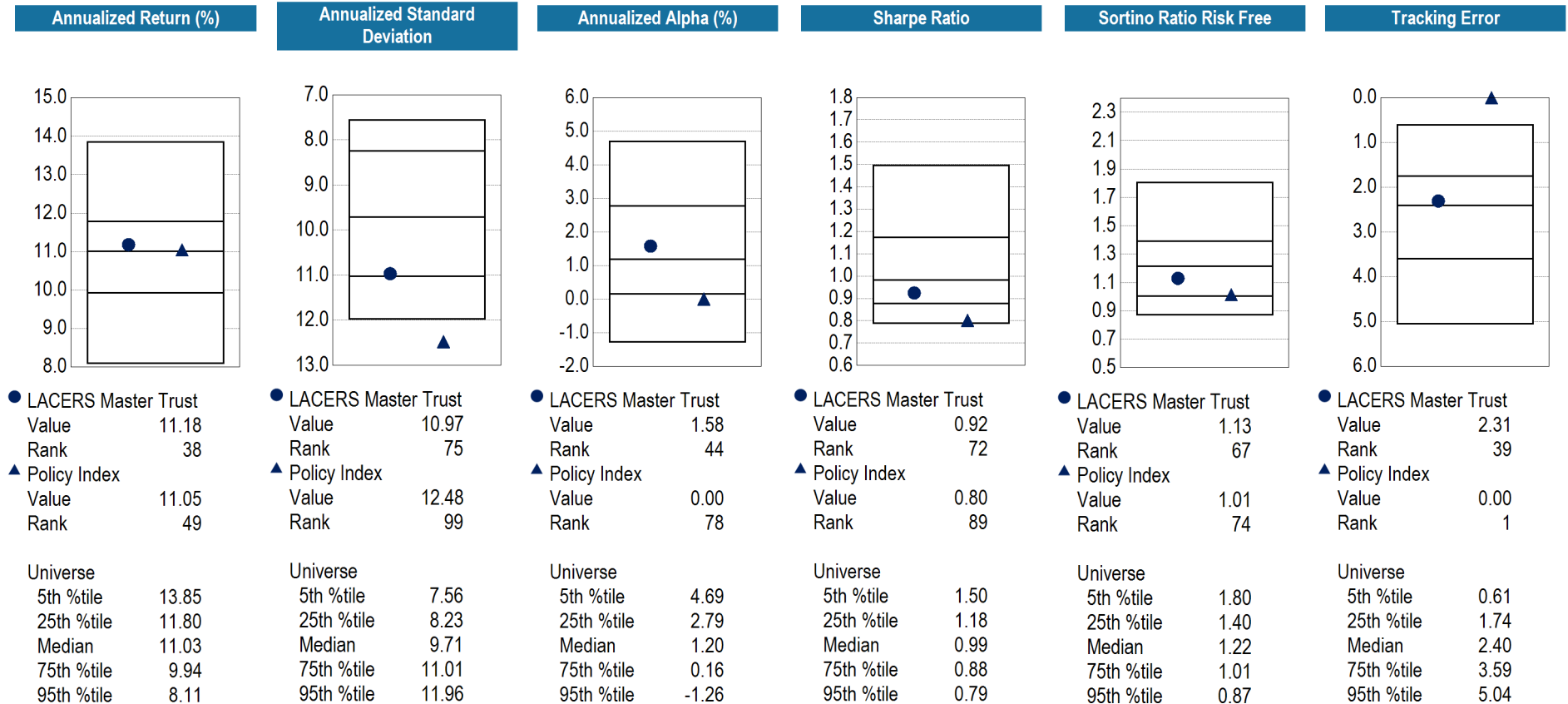
	Return (Rank)																			
5th Percentile	16.05	21.49	0.60	19.00	9.95	2.50	8.38	23.05	14.75	3.13										
25th Percentile	13.67	18.08	-2.13	16.94	8.51	1.00	6.90	18.67	13.81	1.37										
Median	11.41	16.68	-3.64	15.99	7.91	0.20	5.93	16.17	13.15	0.53										
75th Percentile	9.59	15.61	-5.22	14.83	7.34	-0.77	5.28	13.30	12.50	-0.16										
95th Percentile	6.87	13.20	-6.53	12.43	5.71	-2.43	4.12	9.70	9.31	-1.14										
# of Portfolios	89	77	78	78	78	77	77	76	75	74										
● LACERS Master Trust	12.05	(43)	18.10	(25)	-3.89	(60)	17.57	(15)	7.38	(72)	0.49	(35)	5.85	(53)	19.03	(23)	14.47	(10)	0.08	(68)
▲ Policy Index	14.06	(21)	20.88	(9)	-5.04	(71)	17.41	(16)	8.35	(35)	-0.39	(68)	5.58	(61)	17.06	(35)	14.23	(18)	1.17	(32)



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS VS. \$5-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$5-50B Gross  
3 Years



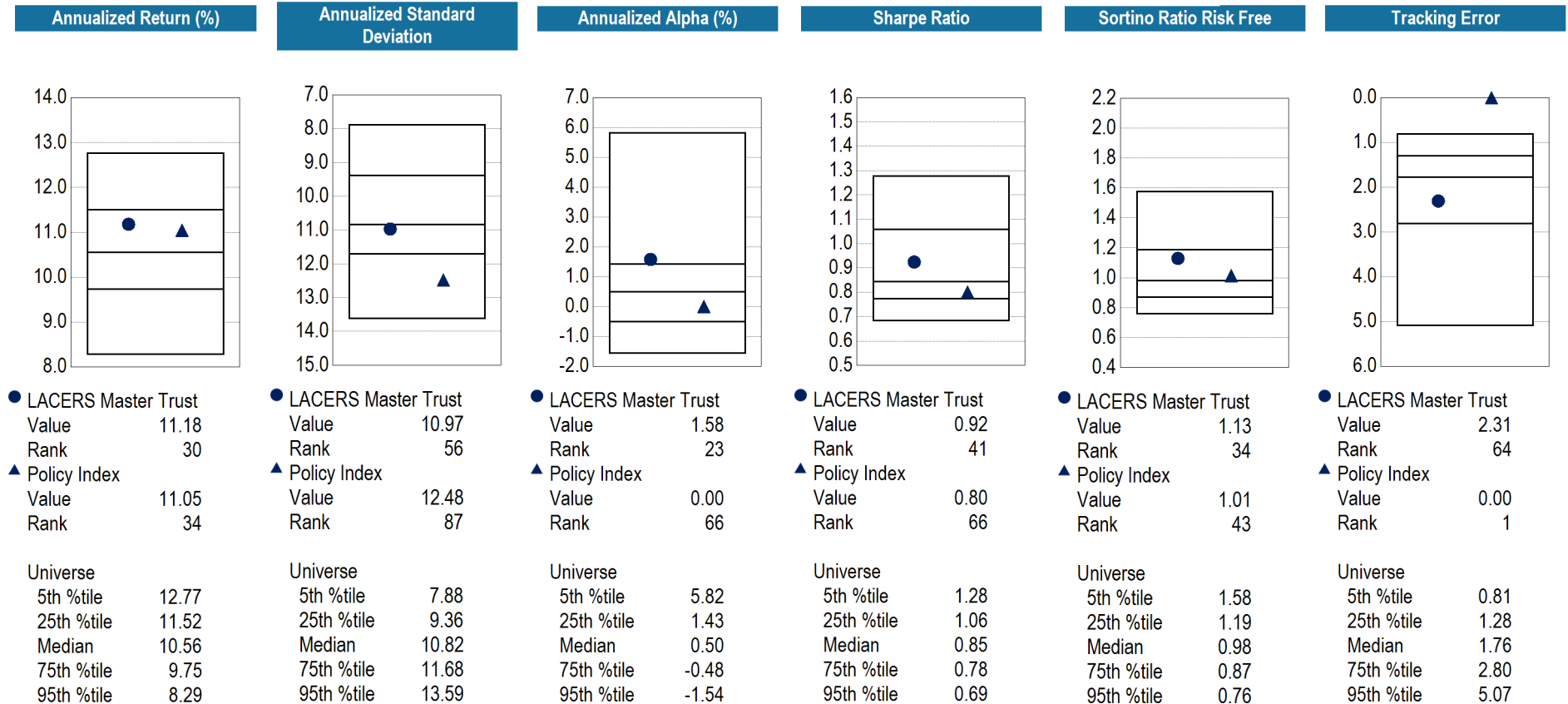
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS VS. \$1-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross  
3 Years



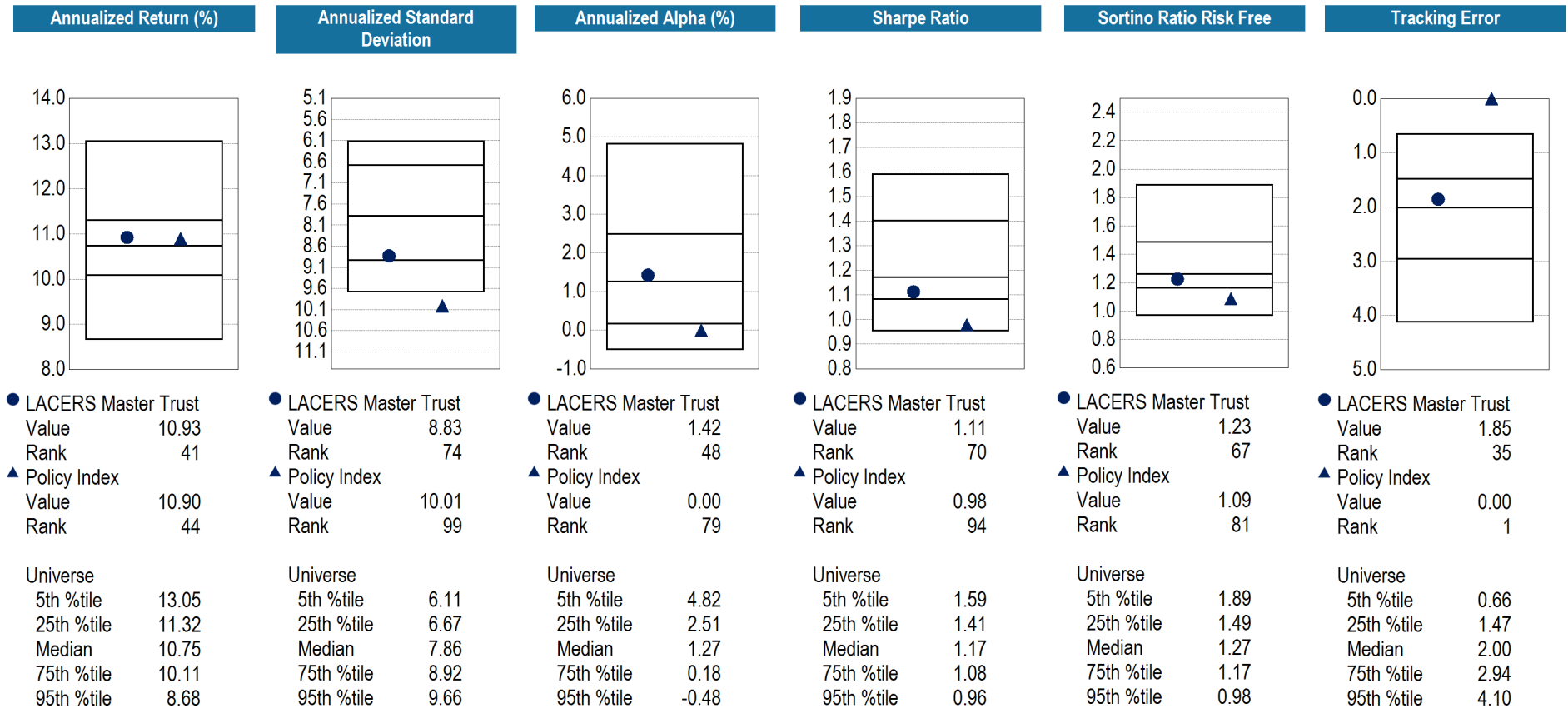
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS VS. \$5-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$5-50B Gross  
5 Years



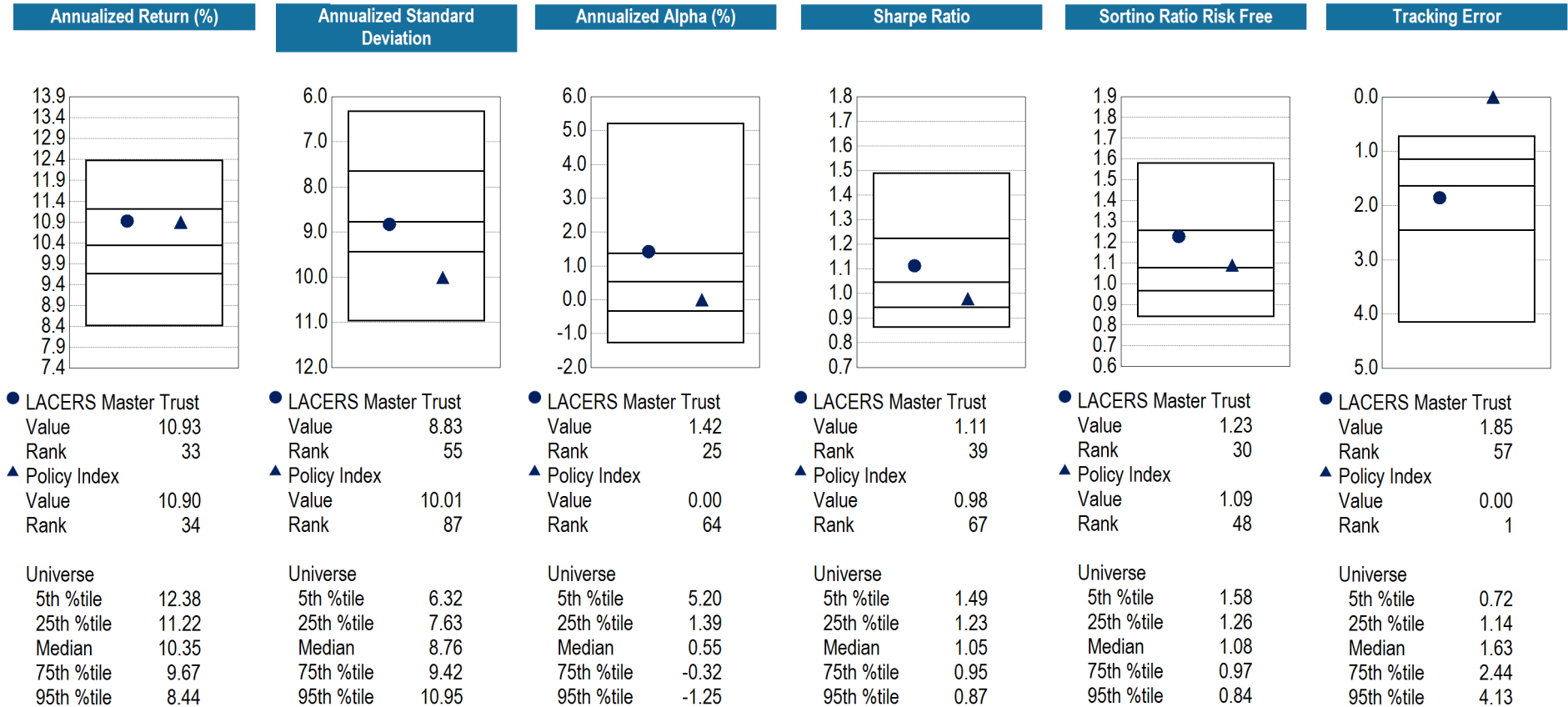
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS VS. \$1-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross  
5 Years



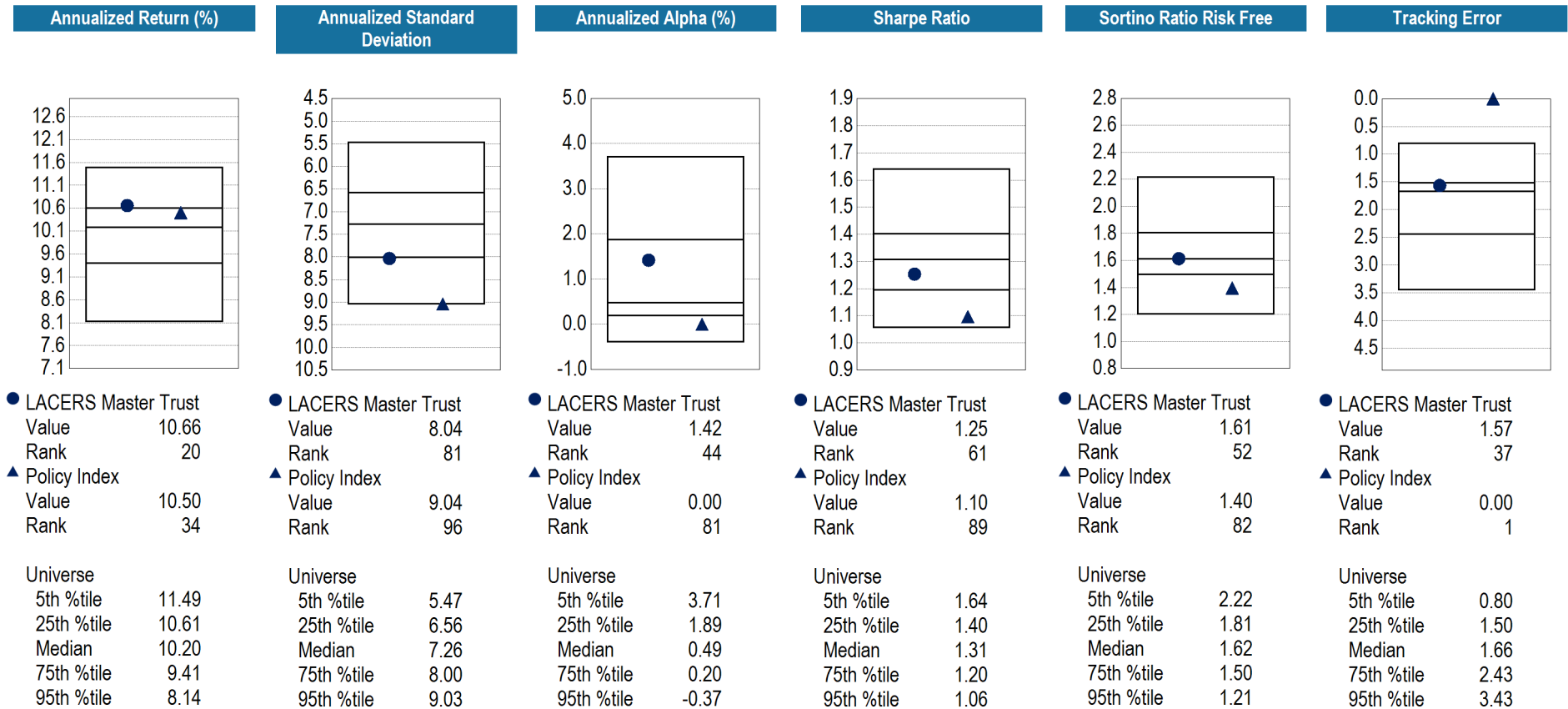
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS VS. \$5-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$5-50B Gross  
10 Years



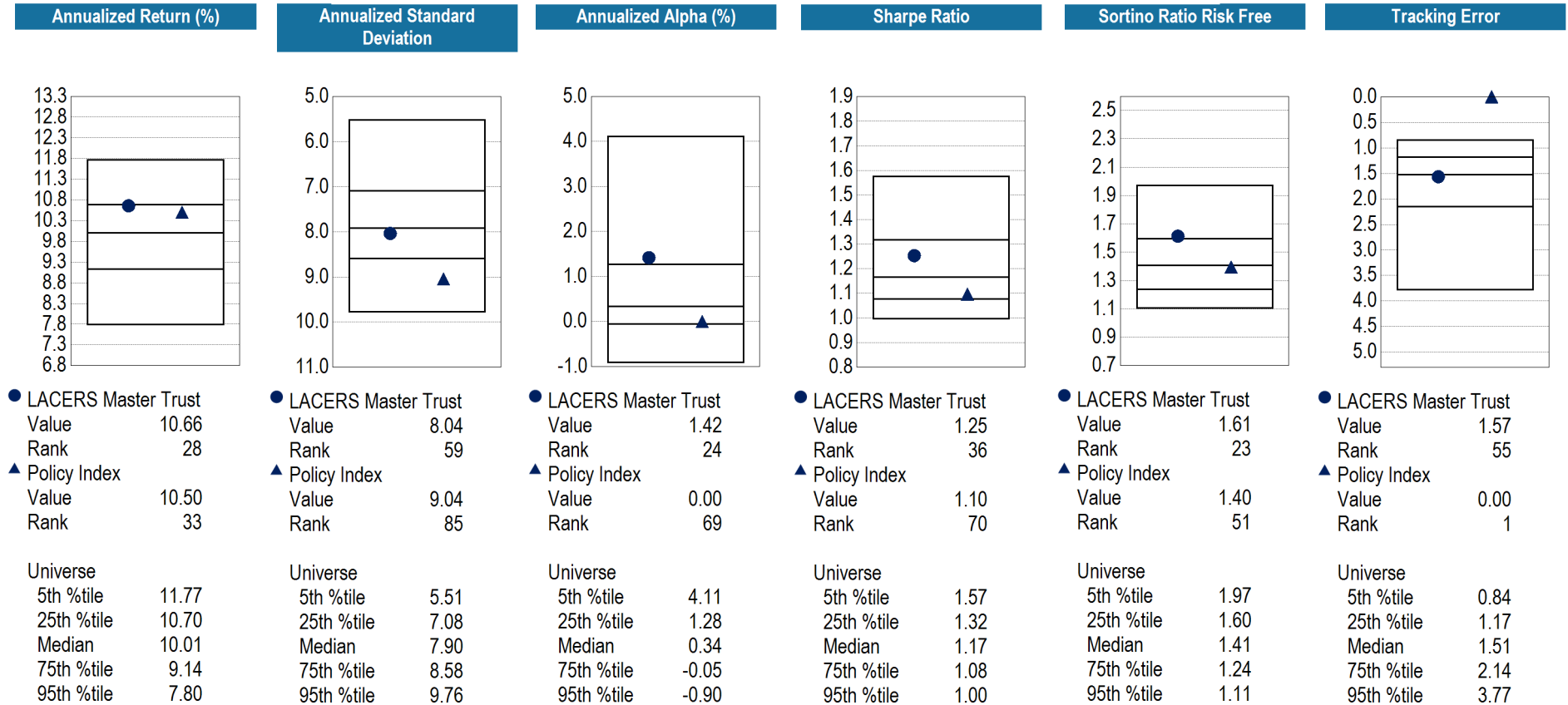
Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



# Los Angeles City Employees' Retirement System

## TOTAL FUND RISK STATISTICS VS. \$1-50B UNIVERSE

LACERS Master Trust vs. InvMetrics Public DB \$1-50B Gross  
10 Years

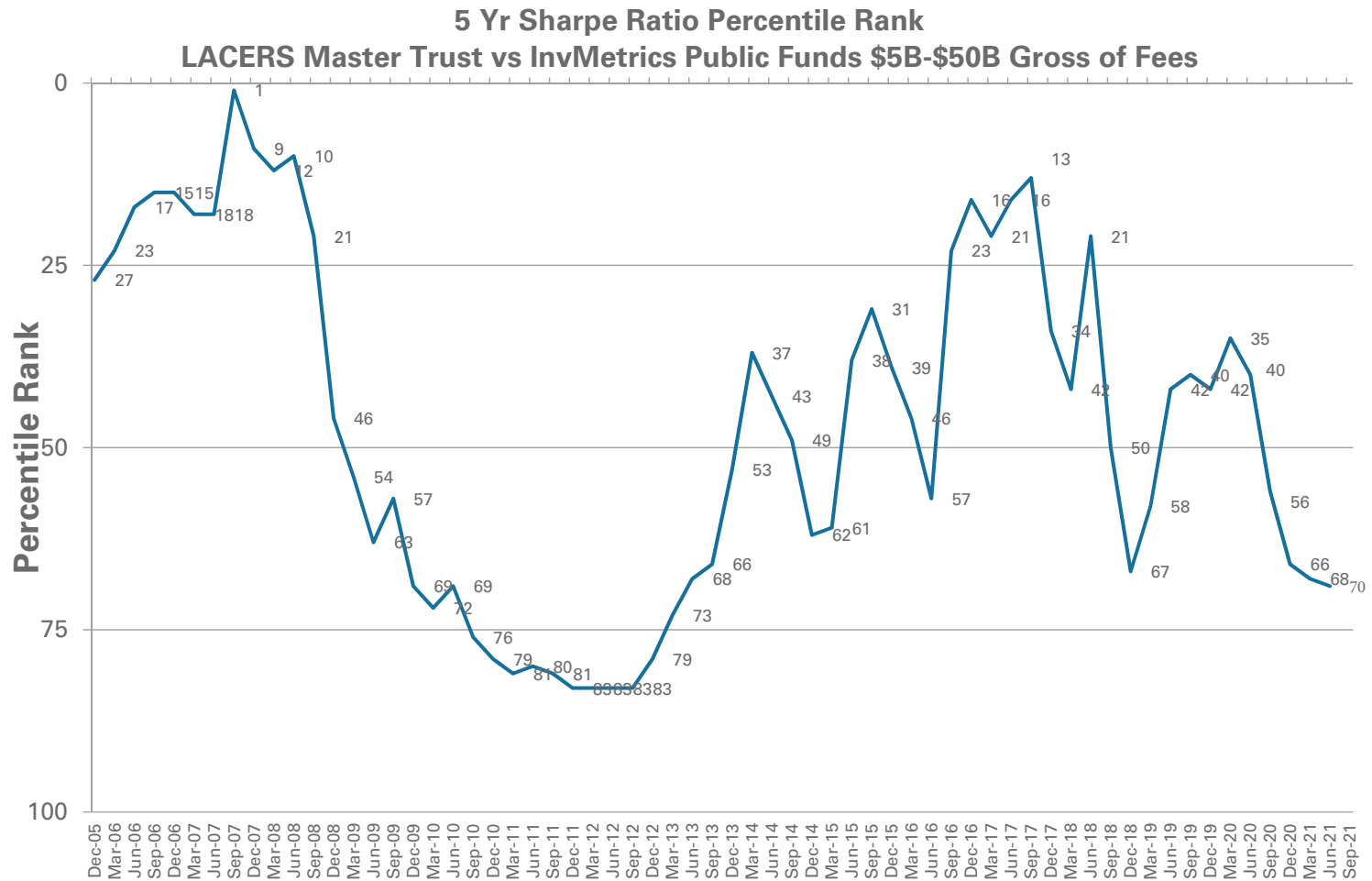


Sortino Ratio RF = Sortino Ratio Risk Free. The risk free rate is the Citi 91 Day T-Bill Index.



# HISTORICAL RISK ADJUSTED RETURN

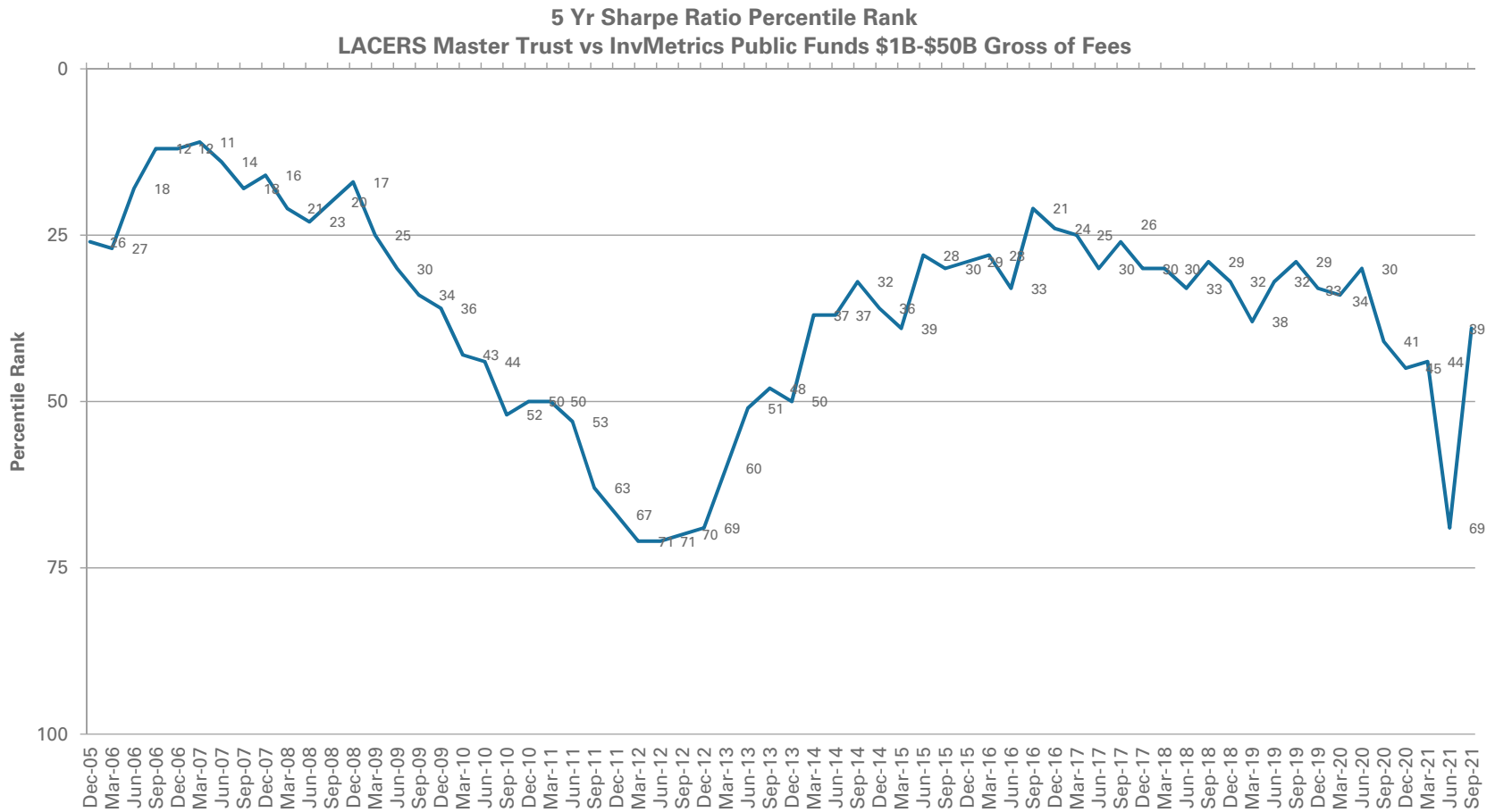
## UNIVERSE COMPARISON (\$5-\$50 B GROSS OF FEES)





# HISTORICAL RISK ADJUSTED RETURN

## UNIVERSE COMPARISON (\$1-\$50 B GROSS OF FEES)





# U.S. EQUITY MANAGER PERFORMANCE



# Los Angeles City Employees' Retirement System

## U.S. EQUITY (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>U.S. Equity</b>	<b>5,447,216,255</b>	<b>100.00</b>	<b>-0.01</b>	<b>15.44</b>	<b>33.09</b>	<b>15.22</b>	<b>16.48</b>	<b>16.58</b>	<b>11.27</b>	<b>Oct-94</b>
U.S. Equity Blend <sup>1</sup>			-0.10	14.99	31.87	16.00	16.85	16.60	10.34	Oct-94
Over/Under			0.09	0.45	1.22	-0.78	-0.37	-0.02	0.93	
RhumbLine Advisers Russell 2000	354,332,355	6.50	-4.36	12.36	47.56	10.58	13.47	--	10.50	Apr-15
Russell 2000			-4.36	12.41	47.68	10.54	13.45	14.63	10.55	Apr-15
Over/Under			0.00	-0.05	-0.12	0.04	0.02		-0.05	
Rhumblin Advisers Russell 2000 Value <sup>2</sup>	155,008,466	2.85	-2.98	22.78	--	--	--	--	22.78	Jan-21
Russell 2000 Value			-2.98	22.92	63.92	8.58	11.03	13.22	22.92	Jan-21
Over/Under			0.00	-0.14					-0.14	
EAM Investors	115,861,669	2.13	-4.58	-0.83	27.11	13.07	19.12	--	16.69	Sep-15
Russell 2000 Growth			-5.65	2.82	33.26	11.70	15.34	15.74	14.79	Sep-15
Over/Under			1.07	-3.65	-6.15	1.37	3.78		1.90	
Principal Global Investors <sup>2</sup>	319,914,642	5.87	1.00	14.77	32.57	19.89	19.01	--	16.21	Aug-14
Russell MidCap			-0.93	15.17	38.11	14.21	14.39	15.52	12.06	Aug-14
Over/Under			1.93	-0.40	-5.54	5.68	4.62		4.15	
RhumbLine Advisers S&P 500	4,068,184,136	74.68	0.58	15.86	30.03	15.83	16.80	16.55	10.57	Feb-93
S&P 500			0.58	15.92	30.00	15.99	16.89	16.63	10.43	Feb-93
Over/Under			0.00	-0.06	0.03	-0.16	-0.09	-0.08	0.14	
Copeland Capital Management <sup>2</sup>	239,385,586	4.39	-1.82	16.83	41.51	--	--	--	41.51	Oct-20
Russell 2000			-4.36	12.41	47.68	10.54	13.45	14.63	47.68	Oct-20
Over/Under			2.54	4.42	-6.17				-6.17	
Granahan Investment Management <sup>2</sup>	104,339,696	1.92	2.01	14.41	57.14	--	--	--	57.14	Oct-20
Russell 2000 Growth			-5.65	2.82	33.26	11.70	15.34	15.74	33.26	Oct-20
Over/Under			7.66	11.59	23.88				23.88	
Segall, Bryant & Hamill <sup>2</sup>	90,163,085	1.66	-2.73	12.24	43.89	--	--	--	43.89	Oct-20
Russell 2000 Value			-2.98	22.92	63.92	8.58	11.03	13.22	63.92	Oct-20
Over/Under			0.25	-10.68	-20.03				-20.03	

1 - U.S. Equity Blend = Russell 3000 from 1/1/2000 to present; 33.75% S&P 500/ 35% Russell 1000 Value/ 12.50% Russell 1000 Growth/ 12.50% Russell 2000 Value/ 6.25% Russell 2000 Growth prior to 1/1/2000.

2- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance  
Benchmark composition as of 7/1/2021 unless otherwise noted.



# Los Angeles City Employees' Retirement System

## U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>U.S. Equity</b>	<b>5,447,216,255</b>	<b>100.00</b>	<b>-0.03</b>	<b>36</b>	<b>15.37</b>	<b>47</b>	<b>32.99</b>	<b>52</b>	<b>15.15</b>	<b>38</b>	<b>16.41</b>	<b>44</b>	<b>16.45</b>	<b>23</b>	<b>--</b>	<b>Oct-94</b>
<i>U.S. Equity Blend<sup>1</sup></i>			<i>-0.10</i>	<i>40</i>	<i>14.99</i>	<i>58</i>	<i>31.87</i>	<i>78</i>	<i>16.00</i>	<i>15</i>	<i>16.85</i>	<i>20</i>	<i>16.60</i>	<i>14</i>	<i>10.34</i>	<i>Oct-94</i>
Over/Under			0.07		0.38		1.12		-0.85		-0.44		-0.15			
<i>InvMetrics Public DB &gt; \$1 Billion US Equity Net Median</i>			-0.31		15.25		32.99		14.78		16.32		16.08		10.16	<i>Oct-94</i>
RhumblLine Advisers Russell 2000	354,332,355	6.50	-4.36	89	12.36	71	47.55	58	10.58	53	13.46	52	--	--	10.49	Apr-15
<i>Russell 2000</i>			<i>-4.36</i>	<i>89</i>	<i>12.41</i>	<i>71</i>	<i>47.68</i>	<i>58</i>	<i>10.54</i>	<i>54</i>	<i>13.45</i>	<i>53</i>	<i>14.63</i>	<i>52</i>	<i>10.55</i>	<i>Apr-15</i>
Over/Under			0.00		-0.05		-0.13		0.04		0.01				-0.06	
<i>eV US Small Cap Equity Net Median</i>			-1.79		16.79		49.67		10.98		13.69		14.70		10.74	<i>Apr-15</i>
RhumblLine Advisers Russell 2000 Value <sup>2</sup>	155,008,466	2.85	-2.98	76	22.78	35	--	--	--	--	--	--	--	--	22.78	Jan-21
<i>Russell 2000 Value</i>			<i>-2.98</i>	<i>76</i>	<i>22.92</i>	<i>34</i>	<i>63.92</i>	<i>11</i>	<i>8.58</i>	<i>62</i>	<i>11.03</i>	<i>52</i>	<i>13.22</i>	<i>56</i>	<i>22.92</i>	<i>Jan-21</i>
Over/Under			0.00		-0.14										-0.14	
<i>eV US Small-Mid Cap Value Equity Net Median</i>			-1.96		19.85		52.64		9.12		11.35		13.34		19.85	<i>Jan-21</i>
EAM Investors	115,861,669	2.13	-4.72	87	-1.34	96	26.23	93	12.29	82	18.28	59	--	--	15.88	Sep-15
<i>Russell 2000 Growth</i>			<i>-5.65</i>	<i>90</i>	<i>2.82</i>	<i>89</i>	<i>33.26</i>	<i>75</i>	<i>11.70</i>	<i>84</i>	<i>15.34</i>	<i>85</i>	<i>15.74</i>	<i>83</i>	<i>14.79</i>	<i>Sep-15</i>
Over/Under			0.93		-4.16		-7.03		0.59		2.94				1.09	
<i>eV US Small Cap Growth Equity Net Median</i>			-1.93		9.55		38.76		17.09		19.83		17.74		18.60	<i>Sep-15</i>
Principal Global Investors <sup>2</sup>	319,914,642	5.87	0.94	26	14.51	50	32.17	64	19.49	22	18.60	32	--	--	15.81	Aug-14
<i>Russell MidCap</i>			<i>-0.93</i>	<i>64</i>	<i>15.17</i>	<i>45</i>	<i>38.11</i>	<i>43</i>	<i>14.21</i>	<i>47</i>	<i>14.39</i>	<i>53</i>	<i>15.52</i>	<i>45</i>	<i>12.06</i>	<i>Aug-14</i>
Over/Under			1.87		-0.66		-5.94		5.28		4.21				3.75	
<i>eV US Mid Cap Equity Net Median</i>			-0.25		14.51		35.60		13.65		14.52		15.23		11.59	<i>Aug-14</i>
RhumblLine Advisers S&P 500	4,068,184,136	74.68	0.58	29	15.85	42	30.03	47	15.82	39	16.79	35	16.55	31	--	Feb-93
<i>S&amp;P 500</i>			<i>0.58</i>	<i>29</i>	<i>15.92</i>	<i>42</i>	<i>30.00</i>	<i>47</i>	<i>15.99</i>	<i>39</i>	<i>16.89</i>	<i>34</i>	<i>16.63</i>	<i>30</i>	<i>10.43</i>	<i>Feb-93</i>
Over/Under			0.00		-0.07		0.03		-0.17		-0.10		-0.08			
<i>eV US Large Cap Equity Net Median</i>			-0.06		15.06		29.41		13.96		14.99		15.07		10.75	<i>Feb-93</i>

1 - U.S. Equity Blend = Russell 3000 from 1/1/2000 to present; 33.75% S&P 500/ 35% Russell 1000 Value/ 12.50% Russell 1000 Growth/ 12.50% Russell 2000 Value/ 6.25% Russell 2000 Growth prior to 1/1/200.

2- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance

eV = eVestment

Benchmark composition as of 7/1/2021 unless otherwise noted.



# Los Angeles City Employees' Retirement System

## U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Copeland Capital Management <sup>1</sup>	239,385,586	4.39	-1.93	54	16.54	51	41.16	73	--	--	--	--	--	--	41.16	Oct-20
<i>Russell 2000</i>			<u>-4.36</u>	89	<u>12.41</u>	71	<u>47.68</u>	58	<u>10.54</u>	54	<u>13.45</u>	53	<u>14.63</u>	52	<u>47.68</u>	Oct-20
Over/Under			2.43		4.13		-6.52								-6.52	
<i>eV US Small Cap Equity Net Median</i>			-1.79		16.79		49.67		10.98		13.69		14.70		49.67	Oct-20
Granahan Investment Management <sup>1</sup>	104,339,696	1.92	1.82	11	13.76	20	56.24	8	--	--	--	--	--	--	56.24	Oct-20
<i>Russell 2000 Growth</i>			<u>-5.65</u>	90	<u>2.82</u>	89	<u>33.26</u>	75	<u>11.70</u>	84	<u>15.34</u>	85	<u>15.74</u>	83	<u>33.26</u>	Oct-20
Over/Under			7.47		10.94		22.98								22.98	
<i>eV US Small Cap Growth Equity Net Median</i>			-1.93		9.55		38.76		17.09		19.83		17.74		38.76	Oct-20
Segall, Bryant & Hamill <sup>1</sup>	90,163,085	1.66	-2.89	71	11.68	94	43.17	89	--	--	--	--	--	--	43.17	Oct-20
<i>Russell 2000 Value</i>			<u>-2.98</u>	73	<u>22.92</u>	46	<u>63.92</u>	33	<u>8.58</u>	51	<u>11.03</u>	46	<u>13.22</u>	51	<u>63.92</u>	Oct-20
Over/Under			0.09		-11.24		-20.75								-20.75	
<i>eV US Small Cap Value Equity Net Median</i>			-1.95		21.98		57.98		8.62		10.88		13.24		57.98	Oct-20

1- Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

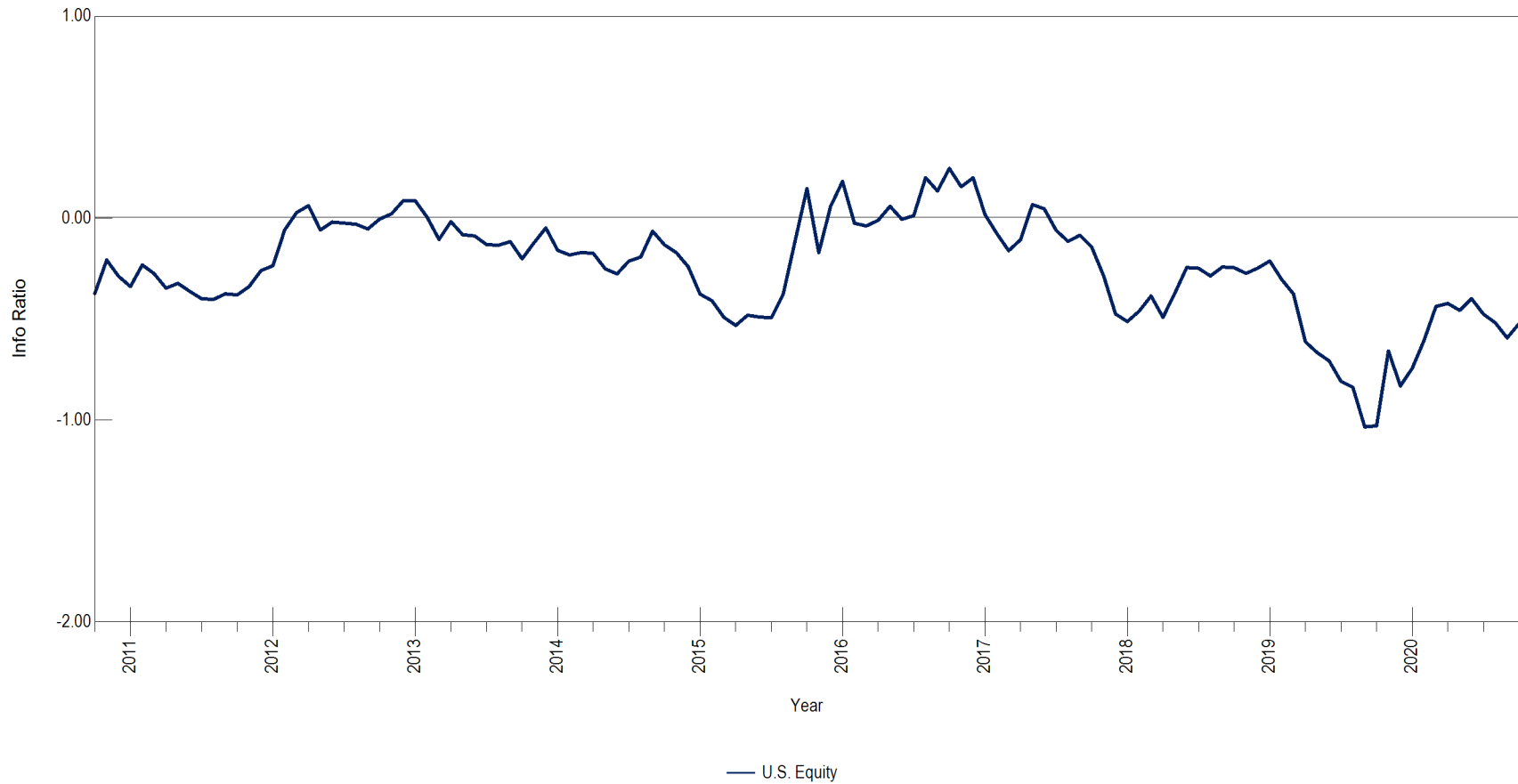
eA = eVestment Alliance



# Los Angeles City Employees' Retirement System

## U.S. EQUITY ROLLING 5 YEAR INFORMATION RATIO

Rolling 5 Year Information Ratio



\*Returns are net of fees.



# INVESTMENT MANAGER REPORT CARD

## U.S. EQUITY

U.S. Equity Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
Principal Global Investors	Jul-14	Mid Cap	✓	✓	✗	✗	✓	✓	✓	✓	✓	811.7	Performance compliant with LACERS' Manager Monitoring Policy
EAM Investors	Sep-15	Small Cap Growth	✓	✗	✗	✗	✓	✗	✓	✗	✓	839.4	Performance compliant with LACERS' Manager Monitoring Policy
Copeland	Oct-20	Small Cap Core	✓	✗	✗	✗	N/A	N/A	N/A	N/A	✗	810.8	Newly hired manager.
Granahan	Oct-20	Small Cap Growth	✓	✓	✓	✓	N/A	N/A	N/A	N/A	✓	605.3	Newly hired manager.
Segall Bryant & Hamill	Oct-20	Small Cap Value	✓	✗	✗	✗	N/A	N/A	N/A	N/A	✗	454.8	On Watch as of 2/9/21 due to organizational changes.
RhumbLine (Passive)	Dec-20	R2000 Value	=	✗	N/A	N/A	N/A	N/A	N/A	N/A	✗	7.1	Newly hired manager.
RhumbLine (Passive)	Feb-93	S&P 500	=	✓	✓	✓	✗	✓	✗	✓	✓✓	214.2	Performance compliant with LACERS' Manager Monitoring Policy
RhumbLine (Passive)	Jun-15	R2000	=	✗	✗	✗	✓	✗	✓	✗	✗	13.2	Performance compliant with LACERS' Manager Monitoring Policy

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2021.
- \* Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
✗	Underperformed
=	Equal to
✓✓	Gross Return



# NON-U.S. EQUITY MANAGER PERFORMANCE





# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Non-U.S. Equity</b>	<b>6,069,681,623</b>	<b>100.00</b>	<b>-1.19</b>	<b>8.83</b>	<b>28.90</b>	<b>10.40</b>	<b>10.85</b>	<b>9.41</b>	<b>5.94</b>	<b>Nov-94</b>
<i>MSCI ACWI ex USA</i>			<u>-2.99</u>	<u>5.90</u>	<u>23.91</u>	<u>8.03</u>	<u>8.94</u>	<u>7.48</u>	<u>5.50</u>	<u>Nov-94</u>
Over/Under			1.80	2.93	4.99	2.37	1.91	1.93	0.44	
<b>Developed ex-U.S.</b>	<b>4,496,453,353</b>	<b>74.08</b>	<b>-0.33</b>	<b>9.34</b>	<b>27.75</b>	<b>9.84</b>	<b>10.57</b>	<b>--</b>	<b>9.56</b>	<b>Jun-12</b>
<i>MSCI EAFE</i>			<u>-0.45</u>	<u>8.35</u>	<u>25.73</u>	<u>7.62</u>	<u>8.81</u>	<u>8.10</u>	<u>8.06</u>	<u>Jun-12</u>
Over/Under			0.12	0.99	2.02	2.22	1.76		1.50	
Barrow Hanley <sup>1</sup>	505,516,993	8.33	-1.11	13.17	36.61	8.29	9.28	--	5.25	Nov-13
<i>MSCI EAFE Value</i>			<u>-0.97</u>	<u>9.61</u>	<u>30.66</u>	<u>3.04</u>	<u>5.96</u>	<u>5.97</u>	<u>2.55</u>	<u>Nov-13</u>
Over/Under			-0.14	3.56	5.95	5.25	3.32		2.70	
Lazard Asset Management <sup>1</sup>	620,160,207	10.22	0.20	8.06	25.61	9.02	9.92	--	6.76	Nov-13
<i>MSCI EAFE</i>			<u>-0.45</u>	<u>8.35</u>	<u>25.73</u>	<u>7.62</u>	<u>8.81</u>	<u>8.10</u>	<u>5.18</u>	<u>Nov-13</u>
Over/Under			0.65	-0.29	-0.12	1.40	1.11		1.58	
MFS Institutional Advisors	597,849,208	9.85	-1.46	6.02	17.74	11.21	12.47	--	8.74	Oct-13
<i>MSCI World ex USA Growth NR USD</i>			<u>-0.25</u>	<u>6.99</u>	<u>20.50</u>	<u>11.92</u>	<u>11.21</u>	<u>9.63</u>	<u>7.52</u>	<u>Oct-13</u>
Over/Under			-1.21	-0.97	-2.76	-0.71	1.26		1.22	
Oberweis Asset Mgmt <sup>1</sup>	345,253,660	5.69	0.78	8.95	33.67	21.25	18.35	--	14.18	Jan-14
<i>MSCI EAFE Small Cap</i>			<u>0.89</u>	<u>10.02</u>	<u>29.02</u>	<u>9.05</u>	<u>10.38</u>	<u>10.73</u>	<u>8.15</u>	<u>Jan-14</u>
Over/Under			-0.11	-1.07	4.65	12.20	7.97		6.03	
SSgA World ex US IMI	2,084,702,211	34.35	-0.34	9.82	28.45	8.79	9.68	8.69	6.21	Aug-93
<i>MSCI World ex USA IMI NR USD<sup>2</sup></i>			<u>-0.45</u>	<u>9.43</u>	<u>27.04</u>	<u>8.10</u>	<u>9.09</u>	<u>8.17</u>	<u>5.89</u>	<u>Aug-93</u>
Over/Under			0.11	0.39	1.41	0.69	0.59	0.52	0.32	
State Street EAFE SC <sup>1</sup>	342,968,752	5.65	0.90	10.04	--	--	--	--	10.04	Jan-21
<i>MSCI EAFE Small Cap</i>			<u>0.89</u>	<u>10.02</u>	<u>29.02</u>	<u>9.05</u>	<u>10.38</u>	<u>10.73</u>	<u>10.02</u>	<u>Jan-21</u>
Over/Under			0.01	0.02					0.02	

1 - Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

2 - Since inception return sourced from SSgA.

eV = eVestment



# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Emerging Markets</b>	<b>1,573,228,269</b>	<b>25.92</b>	<b>-3.63</b>	<b>7.44</b>	<b>31.23</b>	<b>11.77</b>	<b>11.34</b>	<b>--</b>	<b>6.65</b>	<b>Jun-12</b>
<i>MSCI Emerging Markets</i>			<u>-8.09</u>	<u>-1.25</u>	<u>18.20</u>	<u>8.58</u>	<u>9.23</u>	<u>6.09</u>	<u>5.66</u>	<u>Jun-12</u>
Over/Under			4.46	8.69	13.03	3.19	2.11		0.99	
Axiom Emerging Markets	400,881,020	6.60	-7.66	-2.16	18.70	14.22	12.48	--	8.58	May-14
<i>MSCI Emerging Markets</i>			<u>-8.09</u>	<u>-1.25</u>	<u>18.20</u>	<u>8.58</u>	<u>9.23</u>	<u>6.09</u>	<u>5.65</u>	<u>May-14</u>
Over/Under			0.43	-0.91	0.50	5.64	3.25		2.93	
<i>MSCI Emerging Markets Growth NR USD</i>			-10.95	-6.47	9.28	12.15	11.36	8.23	7.87	May-14
DFA Emerging Markets	457,370,963	7.54	-3.29	11.99	37.53	6.81	8.61	--	3.50	Aug-14
<i>MSCI Emerging Markets Value NR USD</i>			<u>-5.08</u>	<u>4.43</u>	<u>28.43</u>	<u>4.77</u>	<u>6.87</u>	<u>3.79</u>	<u>2.09</u>	<u>Aug-14</u>
Over/Under			1.79	7.56	9.10	2.04	1.74		1.41	
State Street Emerging Markets <sup>1</sup>	371,313,062	6.12	-8.38	-1.58	--	--	--	--	-1.58	Jan-21
<i>MSCI Emerging Markets</i>			<u>-8.09</u>	<u>-1.25</u>	<u>18.20</u>	<u>8.58</u>	<u>9.23</u>	<u>6.09</u>	<u>-1.25</u>	<u>Jan-21</u>
Over/Under			-0.29	-0.33					-0.33	
Wasatch Global Investors <sup>1</sup>	343,658,632	5.66	7.31	27.85	--	--	--	--	27.85	Jan-21
<i>MSCI Emerging Markets Small Cap</i>			<u>-2.16</u>	<u>17.20</u>	<u>43.24</u>	<u>13.11</u>	<u>9.75</u>	<u>7.21</u>	<u>17.20</u>	<u>Jan-21</u>
Over/Under			9.47	10.65					10.65	

<sup>1</sup> Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

eA = eVestment



# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Non-U.S. Equity</b>	<b>6,069,681,623</b>	<b>100.00</b>	<b>-1.26</b>	<b>15</b>	<b>8.57</b>	<b>17</b>	<b>28.48</b>	<b>12</b>	<b>10.02</b>	<b>29</b>	<b>10.45</b>	<b>23</b>	<b>9.05</b>	<b>24</b>	<b>--</b>	<b>Nov-94</b>
MSCI ACWI ex USA			-2.99	61	5.90	64	23.91	67	8.03	77	8.94	72	7.48	87	5.50	Nov-94
Over/Under			1.73		2.67		4.57		1.99		1.51		1.57			
<b>Developed ex-U.S.</b>	<b>4,496,453,353</b>	<b>74.08</b>	<b>-0.39</b>	<b>36</b>	<b>9.13</b>	<b>36</b>	<b>27.41</b>	<b>30</b>	<b>9.51</b>	<b>48</b>	<b>10.24</b>	<b>44</b>	<b>--</b>	<b>--</b>	<b>9.26</b>	<b>Jun-12</b>
MSCI EAFE			-0.45	40	8.35	56	25.73	64	7.62	84	8.81	83	8.10	80	8.06	Jun-12
Over/Under			0.06		0.78		1.68		1.89		1.43				1.20	
InvMetrics Public DB > \$1 Billion			-0.70		8.93		26.87		9.40		9.88		9.33		9.26	Jun-12
Dev Mkt ex-US Eq Net Median																
Barrow Hanley <sup>1</sup>	505,516,993	8.33	-1.23	38	12.77	18	36.00	34	7.78	14	8.75	16	--	--	4.74	Nov-13
MSCI EAFE Value			-0.97	36	9.61	51	30.66	54	3.04	84	5.96	72	5.97	86	2.55	Nov-13
Over/Under			-0.26		3.16		5.34		4.74		2.79				2.19	
eV EAFE Value Equity Net Median			-1.64		9.72		31.71		5.21		6.59		7.54		4.20	Nov-13
Lazard Asset Management <sup>1</sup>	620,160,207	10.22	0.08	28	7.68	64	25.03	58	8.48	44	9.37	46	--	--	6.21	Nov-13
MSCI EAFE			-0.45	40	8.35	58	25.73	53	7.62	53	8.81	54	8.10	75	5.18	Nov-13
Over/Under			0.53		-0.67		-0.70		0.86		0.56				1.03	
eV All EAFE Equity Net Median			-0.82		9.12		26.02		7.86		9.01		9.17		6.18	Nov-13
MFS Institutional Advisors	597,849,208	9.85	-1.56	50	5.70	49	17.29	64	10.75	57	11.98	59	--	--	8.25	Oct-13
MSCI World ex USA Growth NR USD			-0.25	37	6.99	28	20.50	51	11.92	42	11.21	67	9.63	86	7.52	Oct-13
Over/Under			-1.31		-1.29		-3.21		-1.17		0.77				0.73	
eV EAFE All Cap Growth Net Median			-1.59		5.55		20.53		11.49		12.28		10.30		7.79	Oct-13
Oberweis Asset Mgmt <sup>1</sup>	345,253,660	5.69	0.59	37	8.26	76	32.58	35	20.28	2	17.37	4	--	--	13.24	Jan-14
MSCI EAFE Small Cap			0.89	30	10.02	72	29.02	56	9.05	49	10.38	52	10.73	68	8.15	Jan-14
Over/Under			-0.30		-1.76		3.56		11.23		6.99				5.09	
eV EAFE Small Cap Equity Net Median			-0.04		12.43		29.64		9.02		10.84		11.36		8.23	Jan-14

<sup>1</sup> Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

eV = eVestment



# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
SSgA World ex US IMI	2,084,702,211	34.35	-0.34	42	9.81	47	28.43	30	8.77	41	9.66	40	8.66	68	--	Aug-93
<i>MSCI World ex USA IMI NR USD</i>			<u>-0.45</u>	47	<u>9.43</u>	52	<u>27.04</u>	42	<u>8.10</u>	49	<u>9.09</u>	51	<u>8.17</u>	83	--	Aug-93
Over/Under			0.11		0.38		1.39		0.67		0.57		0.49			
<i>eV EAFE Core Equity Net Median</i>			-0.59		9.58		25.21		7.95		9.12		9.19		7.13	Aug-93
State Street EAFE SC <sup>1</sup>	342,968,752	5.65	0.89	30	10.02	72	--	--	--	--	--	--	--	--	10.02	Jan-21
<i>MSCI EAFE Small Cap</i>			<u>0.89</u>	30	<u>10.02</u>	72	<u>29.02</u>	56	<u>9.05</u>	49	<u>10.38</u>	52	<u>10.73</u>	68	<u>10.02</u>	Jan-21
Over/Under			0.00		0.00										0.00	
<i>eV EAFE Small Cap Equity Net Median</i>			-0.04		12.43		29.64		9.02		10.84		11.36		12.43	Jan-21
<b>Emerging Markets</b>	<b>1,573,228,269</b>	<b>25.92</b>	<b>-3.75</b>	<b>11</b>	<b>7.06</b>	<b>20</b>	<b>30.66</b>	<b>25</b>	<b>11.23</b>	<b>20</b>	<b>10.79</b>	<b>22</b>	<b>--</b>	<b>--</b>	<b>6.04</b>	<b>Jun-12</b>
<i>MSCI Emerging Markets</i>			<u>-8.09</u>	75	<u>-1.25</u>	80	<u>18.20</u>	79	<u>8.58</u>	51	<u>9.23</u>	34	<u>6.09</u>	42	<u>5.66</u>	Jun-12
Over/Under			4.34		8.31		12.46		2.65		1.56				0.38	
<i>InvMetrics Public DB &gt; \$1 Billion Emg Mkt Eq Net Median</i>			-6.31		3.03		22.58		8.61		8.48		5.42		4.81	Jun-12
Axiom Emerging Markets	400,881,020	6.60	-7.79	62	-2.70	74	17.90	68	13.48	25	11.73	23	--	--	7.87	May-14
<i>MSCI Emerging Markets</i>			<u>-8.09</u>	65	<u>-1.25</u>	66	<u>18.20</u>	67	<u>8.58</u>	63	<u>9.23</u>	54	<u>6.09</u>	70	<u>5.65</u>	May-14
Over/Under			0.30		-1.45		-0.30		4.90		2.50				2.22	
<i>MSCI Emerging Markets Growth NR USD</i>			-10.95	91	-6.47	89	9.28	96	12.15	32	11.36	27	8.23	23	7.87	May-14
<i>eV Emg Mkts Equity Net Median</i>			-6.84		1.41		21.38		9.68		9.48		6.66		6.17	May-14
DFA Emerging Markets <sup>1</sup>	457,370,963	7.54	-3.40	21	11.60	17	36.90	17	6.28	89	8.08	72	--	--	3.00	Aug-14
<i>MSCI Emerging Markets Value NR USD</i>			<u>-5.08</u>	31	<u>4.43</u>	36	<u>28.43</u>	29	<u>4.77</u>	96	<u>6.87</u>	85	<u>3.79</u>	99	<u>2.09</u>	Aug-14
Over/Under			1.68		7.17		8.47		1.51		1.21				0.91	
<i>eV Emg Mkts Equity Net Median</i>			-6.84		1.41		21.38		9.68		9.48		6.66		5.37	Aug-14
State Street Emerging Markets <sup>1</sup>	371,313,062	6.12	-8.39	69	-1.60	68	--	--	--	--	--	--	--	--	-1.60	Jan-21
<i>MSCI Emerging Markets</i>			<u>-8.09</u>	65	<u>-1.25</u>	66	<u>18.20</u>	67	<u>8.58</u>	63	<u>9.23</u>	54	<u>6.09</u>	70	<u>-1.25</u>	Jan-21
Over/Under			-0.30		-0.35										-0.35	
<i>eV Emg Mkts Equity Net Median</i>			-6.84		1.41		21.38		9.68		9.48		6.66		1.41	Jan-21

<sup>1</sup> Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.  
eV = eVestment



# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Wasatch Global Investors <sup>1</sup>	343,658,632	5.66	7.06	1	27.32	2	--	--	--	--	--	--	--	--	27.32	Jan-21
MSCI Emerging Markets Small Cap			-2.16	34	17.20	26	43.24	14	13.11	54	9.75	65	7.21	81	17.20	Jan-21
Over/Under			9.22		10.12										10.12	
eV Emg Mkts Small Cap Equity																
Net Median			-3.43		14.29		37.06		13.32		10.83		8.47		14.29	Jan-21

<sup>1</sup> Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.  
eV = eVestment



# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY COUNTRY ALLOCATION

Versus MSCI ACWI ex USA - Quarter Ending September 30, 2021		
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Europe</b>		
Austria	0.1%	0.1%
Belgium	0.2%	0.6%
Croatia**	0.0%	0.0%
Czech Republic*	0.0%	0.0%
Denmark	1.6%	1.7%
Estonia**	0.0%	0.0%
Finland	1.9%	0.7%
France	10.6%	7.1%
Germany	5.7%	5.7%
Greece*	0.0%	0.1%
Hungary*	0.2%	0.1%
Ireland	2.2%	0.4%
Italy	1.5%	1.6%
Lithuania**	0.0%	0.0%
Luxembourg	0.3%	0.0%
Netherlands	2.3%	3.1%
Norway	0.8%	0.4%
Poland*	0.0%	0.2%
Portugal	0.0%	0.1%
Romania**	0.0%	0.0%
Russia*	0.5%	1.1%
Serbia**	0.0%	0.0%
Slovenia**	0.0%	0.0%
Spain	1.8%	1.5%
Sweden	2.6%	2.3%
Switzerland	5.8%	6.0%
United Kingdom	14.1%	9.1%
<b>Total-Europe</b>	<b>52.2%</b>	<b>42.0%</b>

Versus MSCI ACWI ex USA - Quarter Ending September 30, 2021		
	Manager Ending Allocation (USD)	Index Ending Allocation (USD)
<b>Americas</b>		
Argentina*	0.2%	0.0%
Brazil*	0.4%	1.3%
Canada	4.3%	7.1%
Colombia*	0.3%	0.1%
Mexico*	1.1%	0.6%
United States	3.1%	0.0%
<b>Total-Americas</b>	<b>9.5%</b>	<b>9.2%</b>
<b>AsiaPacific</b>		
Australia	1.5%	4.4%
China*	3.8%	10.1%
Hong Kong	3.3%	1.9%
India*	2.4%	3.6%
Indonesia*	0.2%	0.4%
Japan	15.8%	15.3%
Korea*	2.6%	3.7%
Malaysia*	0.0%	0.4%
New Zealand	0.1%	0.2%
Singapore	1.6%	0.7%
Taiwan*	2.7%	4.4%
Thailand*	0.2%	0.5%
<b>Total-AsiaPacific</b>	<b>34.1%</b>	<b>45.8%</b>
<b>Other</b>		
Israel	1.1%	0.4%
Other Countries	1.0%	0.0%
South Africa*	0.5%	0.9%
<b>Total-Other</b>	<b>2.6%</b>	<b>3.1%</b>
<b>Totals</b>		
Developed	82.4%	70.5%
Emerging*	15.1%	29.5%
Other	1.0%	
Cash	1.5%	

\* = Emerging Market

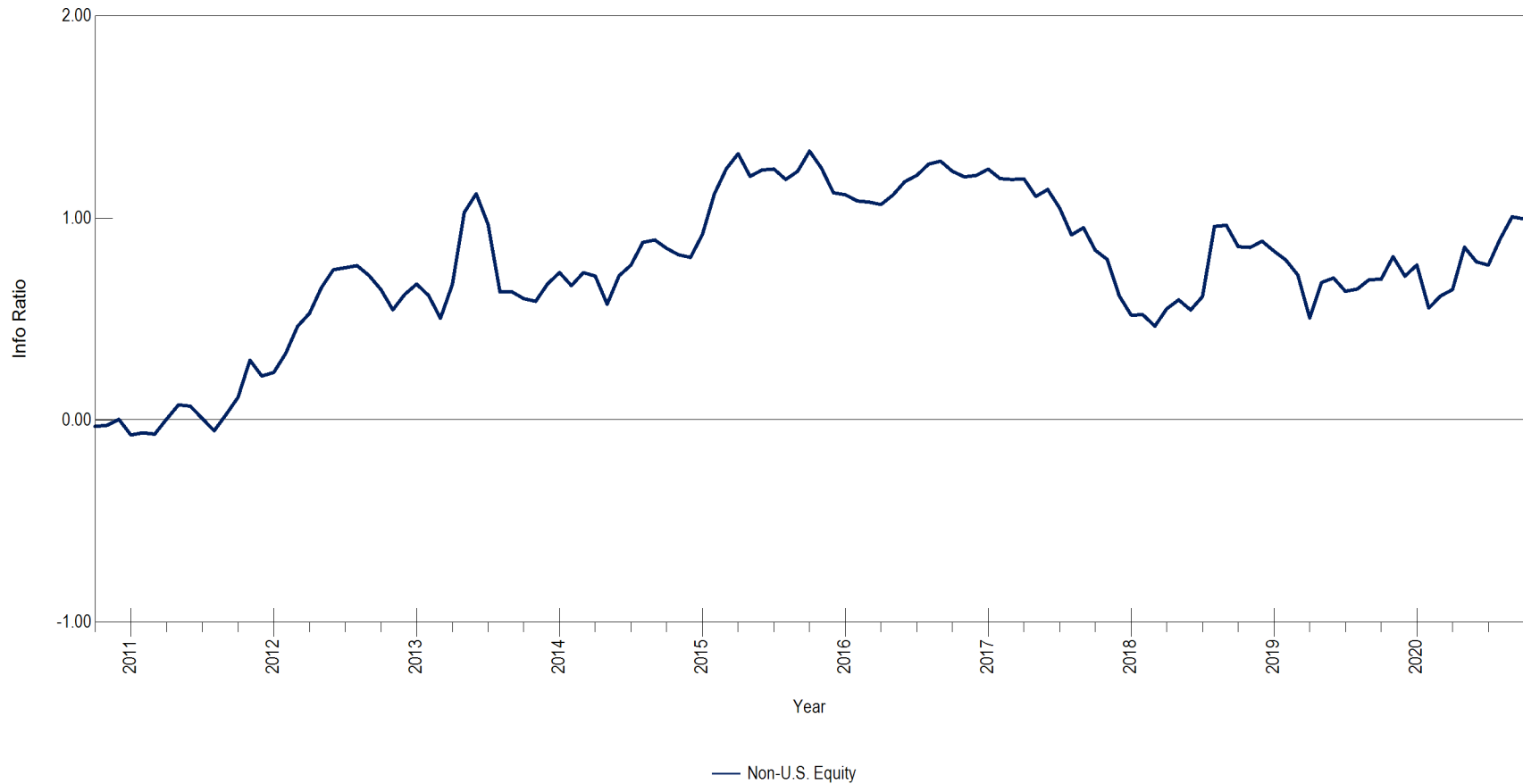
\*\* = Frontier Market



# Los Angeles City Employees' Retirement System

## NON-U.S. EQUITY ROLLING 5 YEAR INFORMATION RATIO

Rolling 5 Year Information Ratio



\*Returns are net of fees



# INVESTMENT MANAGER REPORT CARD

## NON-U.S. EQUITY

Non-U.S. Equity Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
SsgA (Passive)	Dec-20	Emerging Markets	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	*	86.1	Newly hired manager.
Axiom International	Mar-14	Emerging Markets	✓	*	*	*	✓	✓	✓	✓	✓	2,708.7	On Watch in August 2020 due to benchmark change, Watch status extended in October 2020 due to CIO change, Watch status extended in October 2021 due to departure of President.
DFA Emerging Markets	Jul-14	Emerging Markets	✓	✓	✓	✓	✓	*	✓	*	✓	1,948.4	Performance compliant with LACERS' Manager Monitoring Policy
Wasatch	Dec-20	Emerging Markets Small Cap	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	✓	1,139.1	Newly hired manager
Oberweis Asset Mgt.	Jan-14	Non-U.S. Developed	*	✓	✓	✓	✓	✓	✓	✓	✓	2,856.8	Performance compliant with LACERS' Manager Monitoring Policy
Barrow, Hanley, Mewhinney & Strauss	Nov-13	Non-U.S. Developed	*	✓	✓	✓	✓	✓	✓	✓	✓	2,351.1	On Watch in August 2020 due to organizational change, Watch status extended in August 2021 due to organizational change and AUM Strategy Concentration.
Lazard Asset Mgt.	Nov-13	Non-U.S. Developed	✓	✓	*	*	✓	✓	✓	✓	✓	2,946.6	On Watch since August 2021 due to performance.
MFS Institutional Advisors	Oct-13	Non-U.S. Developed	*	=	*	*	*	✓	✓	*	✓	2,419.3	Performance compliant with LACERS' Manager Monitoring Policy
SsgA (Passive)	Dec-20	Non-U.S. Developed Small Cap	=	✓	N/A	N/A	N/A	N/A	N/A	N/A	✓	69.7	Newly hired manager
SsgA (Passive)	Aug-93	Non-U.S. Developed	✓	✓	✓	✓	✓	✓	✓	✓	✓✓	401.7	Performance compliant with LACERS' Manager Monitoring Policy

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2021.
- \* Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
*	Underperformed
=	Equal to
✓✓	Gross Return







# CORE FIXED INCOME MANAGER PERFORMANCE



# Los Angeles City Employees' Retirement System

## CORE FIXED INCOME (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>3,758,101,505</b>	<b>100.00</b>	<b>0.13</b>	<b>-1.03</b>	<b>0.13</b>	<b>6.08</b>	<b>3.54</b>	<b>--</b>	<b>3.68</b>	<b>Jul-12</b>
<i>Core Fixed Income Blend</i>			<i>0.05</i>	<i>-1.55</i>	<i>-0.90</i>	<i>5.36</i>	<i>2.94</i>	<i>3.19</i>	<i>2.98</i>	<i>Jul-12</i>
Over/Under			0.08	0.52	1.03	0.72	0.60		0.70	
Loomis Sayles & Co. Core Fixed Income	653,752,622	17.40	0.16	-1.09	0.27	6.73	4.15	4.51	8.87	Jul-80
<i>Loomis Custom Benchmark</i>			<i>0.05</i>	<i>-1.55</i>	<i>-0.90</i>	<i>5.36</i>	<i>2.94</i>	<i>3.19</i>	<i>7.39</i>	<i>Jul-80</i>
Over/Under			0.11	0.46	1.17	1.37	1.21	1.32	1.48	
SSgA U.S. Aggregate Bond	1,156,661,101	30.78	0.06	-1.53	-0.85	5.41	2.98	--	3.28	Aug-14
<i>Bloomberg US Aggregate TR</i>			<i>0.05</i>	<i>-1.55</i>	<i>-0.90</i>	<i>5.36</i>	<i>2.94</i>	<i>3.01</i>	<i>3.24</i>	<i>Aug-14</i>
Over/Under			0.01	0.02	0.05	0.05	0.04		0.04	
Baird Advisors Core Fixed Income <sup>1</sup>	651,050,272	17.32	0.23	--	--	--	--	--	0.23	Jul-21
<i>Bloomberg US Aggregate TR</i>			<i>0.05</i>	<i>-1.55</i>	<i>-0.90</i>	<i>5.36</i>	<i>2.94</i>	<i>3.01</i>	<i>0.05</i>	<i>Jul-21</i>
Over/Under			0.18						0.18	
Garcia Hamilton & Associates <sup>1</sup>	430,404,184	11.45	-0.03	--	--	--	--	--	-0.03	Jul-21
<i>Bloomberg US Aggregate TR</i>			<i>0.05</i>	<i>-1.55</i>	<i>-0.90</i>	<i>5.36</i>	<i>2.94</i>	<i>3.01</i>	<i>0.05</i>	<i>Jul-21</i>
Over/Under			-0.08						-0.08	
JP Morgan Investment Management <sup>1</sup>	431,831,861	11.49	0.18	--	--	--	--	--	0.18	Jul-21
<i>Bloomberg US Aggregate TR</i>			<i>0.05</i>	<i>-1.55</i>	<i>-0.90</i>	<i>5.36</i>	<i>2.94</i>	<i>3.01</i>	<i>0.05</i>	<i>Jul-21</i>
Over/Under			0.13						0.13	
Income Research & Management <sup>1</sup>	434,094,254	11.55	0.19	--	--	--	--	--	0.19	Jul-21
<i>Bloomberg US Aggregate TR</i>			<i>0.05</i>	<i>-1.55</i>	<i>-0.90</i>	<i>5.36</i>	<i>2.94</i>	<i>3.01</i>	<i>0.05</i>	<i>Jul-21</i>
Over/Under			0.14						0.14	

<sup>1</sup> Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.



# Los Angeles City Employees' Retirement System

## CORE FIXED INCOME (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Core Fixed Income</b>	<b>3,758,101,505</b>	<b>100.00</b>	<b>0.11</b>	<b>48</b>	<b>-1.08</b>	<b>64</b>	<b>0.06</b>	<b>64</b>	<b>5.98</b>	<b>33</b>	<b>3.44</b>	<b>54</b>	<b>--</b>	<b>--</b>	<b>3.56</b>	<b>Jul-12</b>
Core Fixed Income Blend			0.05	63	-1.55	83	-0.90	84	5.36	61	2.94	93	3.19	84	2.98	Jul-12
Over/Under			0.06		0.47		0.96		0.62		0.50				0.58	
InvMetrics Public DB > \$1 Billion US Fixed Income Net Median			0.08		-0.85		1.07		5.52		3.71		3.83		3.54	Jul-12
Loomis Sayles & Co. Core Fixed Income	653,752,622	17.40	0.16	14	-1.15	40	0.18	31	6.61	4	4.02	3	4.38	5	--	Jul-80
Loomis Custom Benchmark			0.05	38	-1.55	65	-0.90	70	5.36	76	2.94	78	3.19	68	7.39	Jul-80
Over/Under			0.11		0.40		1.08		1.25		1.08		1.19			
eV US Core Fixed Inc Net Median			0.02		-1.34		-0.37		5.64		3.23		3.36		--	Jul-80
SSgA U.S. Aggregate Bond	1,156,661,101	30.78	0.06	37	-1.55	65	-0.88	69	5.37	74	2.94	78	--	--	3.24	Aug-14
Bloomberg US Aggregate TR			0.05	38	-1.55	65	-0.90	70	5.36	76	2.94	78	3.01	82	3.24	Aug-14
Over/Under			0.01		0.00		0.02		0.01		0.00				0.00	
eV US Core Fixed Inc Net Median			0.02		-1.34		-0.37		5.64		3.23		3.36		3.44	Aug-14
Baird Advisors Core Fixed Income <sup>1</sup>	651,050,272	17.32	0.23	6	--	--	--	--	--	--	--	--	--	--	0.23	Jul-21
Bloomberg US Aggregate TR			0.05	38	-1.55	65	-0.90	70	5.36	76	2.94	78	3.01	82	0.05	Jul-21
Over/Under			0.18												0.18	
eV US Core Fixed Inc Net Median			0.02		-1.34		-0.37		5.64		3.23		3.36		0.02	Jul-21
Garcia Hamilton & Associates <sup>1</sup>	430,404,184	11.45	-0.03	64	--	--	--	--	--	--	--	--	--	--	-0.03	Jul-21
Bloomberg US Aggregate TR			0.05	38	-1.55	65	-0.90	70	5.36	76	2.94	78	3.01	82	0.05	Jul-21
Over/Under			-0.08												-0.08	
eV US Core Fixed Inc Net Median			0.02		-1.34		-0.37		5.64		3.23		3.36		0.02	Jul-21
JP Morgan Investment Management <sup>1</sup>	431,831,861	11.49	0.17	14	--	--	--	--	--	--	--	--	--	--	0.17	Jul-21
Bloomberg US Aggregate TR			0.05	38	-1.55	65	-0.90	70	5.36	76	2.94	78	3.01	82	0.05	Jul-21
Over/Under			0.12												0.12	
eV US Core Fixed Inc Net Median			0.02		-1.34		-0.37		5.64		3.23		3.36		0.02	Jul-21
Income Research & Management <sup>1</sup>	434,094,254	11.55	0.19	10	--	--	--	--	--	--	--	--	--	--	0.19	Jul-21
Bloomberg US Aggregate TR			0.05	38	-1.55	65	-0.90	70	5.36	76	2.94	78	3.01	82	0.05	Jul-21
Over/Under			0.14												0.14	
eV US Core Fixed Inc Net Median			0.02		-1.34		-0.37		5.64		3.23		3.36		0.02	Jul-21

<sup>1</sup> Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

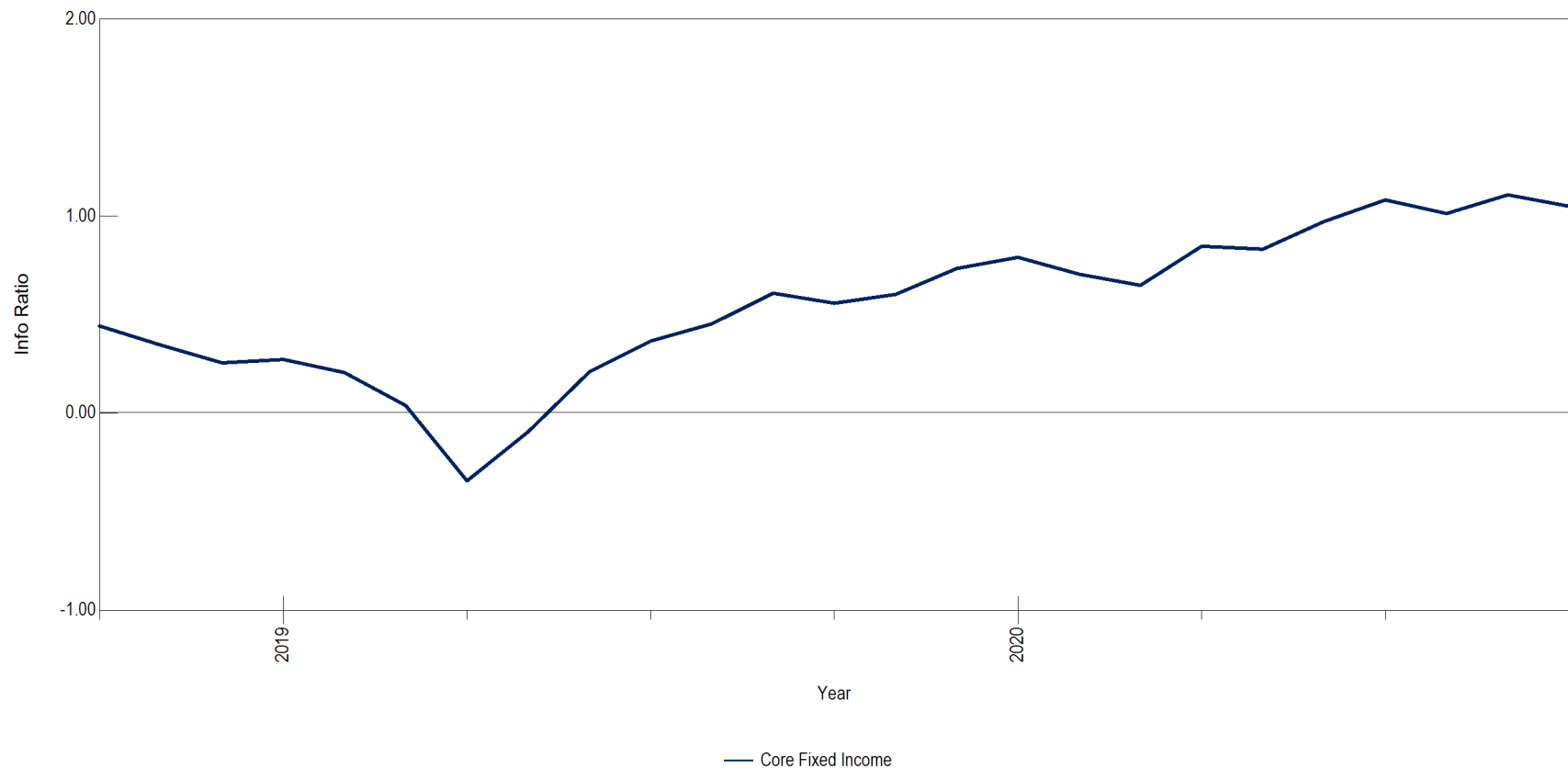
eV = eVestment



# Los Angeles City Employees' Retirement System

## CORE FIXED INCOME 3 YEAR INFORMATION RATIO

Rolling 3 Year Information Ratio

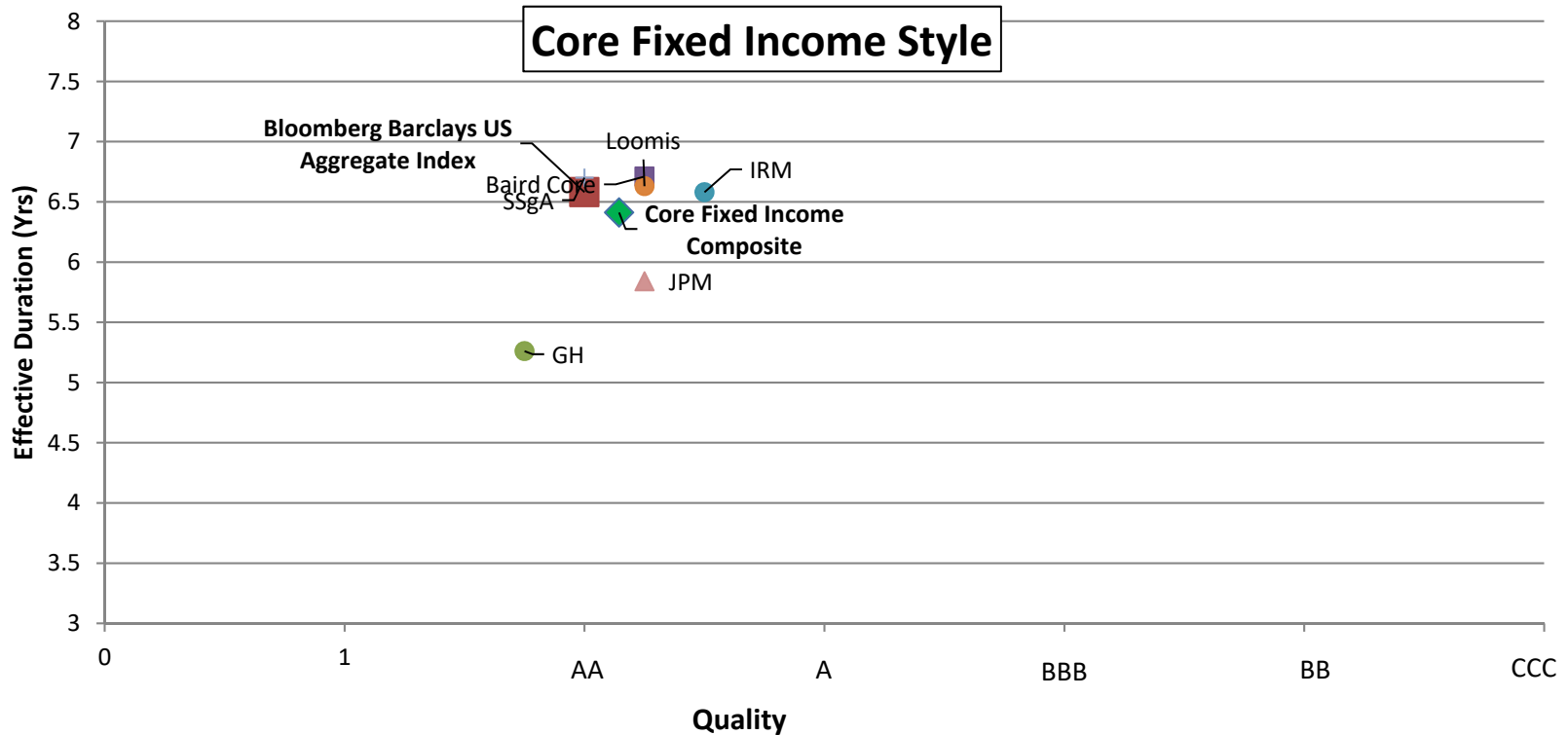


\*Returns are net of fees



# CORE FIXED INCOME

## STYLE ANALYSIS



- LACERS Core Fixed Income Composite has a slightly lower duration (interest rate risk) than its benchmark.
- The Core Fixed Income Composite has slightly lower average quality rating than its benchmark.



# INVESTMENT MANAGER REPORT CARD

## CORE FIXED INCOME

Core Fixed Income Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
Loomis Sayles	Jul-80	Core	✓	✓	✓	✓	✓	✓	✓	✓	✓✓	1,062.4	Performance compliant with LACERS' Manager Monitoring Policy
Baird Advisors	Jun-21	Core	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	✓	23.5	Newly hired manager.
Garcia Hamilton	Jun-21	Core	✘	✘	N/A	N/A	N/A	N/A	N/A	N/A	✘	12.7	Newly hired manager.
IR&M	Jul-21	Core	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	✓	N/A	Newly hired manager.
J.P. Morgan	Jun-21	Core	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	✓	14.2	Newly hired manager.
SSgA (Passive)	Aug-14	Core	=	✘	✓	✘	✓	✘	✘	✘	=	243.1	Performance compliant with LACERS' Manager Monitoring Policy

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2021.
- \* Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
✘	Underperformed
=	Equal to
✓✓	Gross Return





# CREDIT OPPORTUNITIES MANAGER PERFORMANCE



# Los Angeles City Employees' Retirement System

## CREDIT OPPORTUNITIES (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Credit Opportunities</b>	<b>1,879,011,306</b>	<b>100.00</b>	<b>-0.32</b>	<b>1.00</b>	<b>7.07</b>	<b>5.70</b>	<b>5.29</b>	<b>--</b>	<b>5.46</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend<sup>1</sup></i>			<i>-0.57</i>	<i>1.53</i>	<i>7.84</i>	<i>6.16</i>	<i>5.41</i>	<i>--</i>	<i>5.82</i>	<i>Jun-13</i>
Over/Under			0.25	-0.53	-0.77	-0.46	-0.12		-0.36	
PGIM Blended <sup>2</sup>	500,635,482	26.64	-1.43	--	--	--	--	--	-2.58	Feb-21
<i>50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified</i>			<i>-1.91</i>	<i>-3.88</i>	<i>3.52</i>	<i>4.70</i>	<i>3.02</i>	<i>3.47</i>	<i>-2.84</i>	<i>Feb-21</i>
Over/Under			0.48						0.26	
Wellington <sup>2</sup>	497,562,288	26.48	-1.69	--	--	--	--	--	-2.28	Feb-21
<i>50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified</i>			<i>-1.91</i>	<i>-3.88</i>	<i>3.52</i>	<i>4.70</i>	<i>3.02</i>	<i>3.47</i>	<i>-2.84</i>	<i>Feb-21</i>
Over/Under			0.22						0.56	
Bain Capital Senior Loan Fund, LP*	242,713,106	12.92	1.54	6.20	11.11	5.24	5.28	--	4.71	Jun-15
<i>Credit Suisse Leveraged Loans</i>			<i>1.13</i>	<i>4.65</i>	<i>8.46</i>	<i>4.09</i>	<i>4.64</i>	<i>5.04</i>	<i>4.36</i>	<i>Jun-15</i>
Over/Under			0.41	1.55	2.65	1.15	0.64		0.35	
DDJ Capital Management <sup>2</sup>	301,327,369	16.04	1.45	5.80	--	--	--	--	10.19	Nov-20
<i>50% BBgBarc US High Yield 2% Issuer Cap / 50% Credit Suisse Leveraged Loan Index</i>			<i>1.01</i>	<i>4.60</i>	<i>9.87</i>	--	--	--	<i>9.50</i>	<i>Nov-20</i>
Over/Under			0.44	1.20					0.69	
Loomis Sayles & Co. High Yield <sup>2</sup>	302,414,270	16.09	0.59	4.14	--	--	--	--	11.23	Nov-20
<i>Bloomberg US High Yield 2% Issuer Cap TR</i>			<i>0.89</i>	<i>4.54</i>	<i>11.27</i>	<i>6.89</i>	<i>6.50</i>	<i>7.42</i>	<i>10.73</i>	<i>Nov-20</i>
Over/Under			-0.30	-0.40					0.50	
Benefit Street Partners LLC	34,358,784	1.83	0.00	0.08	--	--	--	--	0.08	Dec-20
<i>Credit Suisse Leveraged Loan Qtr Lag</i>			<i>1.44</i>	<i>7.24</i>	<i>11.67</i>	<i>4.36</i>	<i>5.04</i>	<i>4.52</i>	<i>7.98</i>	<i>Dec-20</i>
Over/Under			-1.44	-7.16					-7.90	

1 - Credit Opportunities Blend = 20.7% Bloomberg US High Yield 2% Issuer Cap + 20.7% Credit Suisse Leveraged Loan Index + 55% Emerging Markets Debt Blend + 3.6% Credit Suisse Leveraged Loan Index (One Quarter Lagged).

2 - Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

Benchmark composition as of 7/1/2021 unless otherwise noted.

eV= eVestment Alliance

\* Net of fee return since vehicle is commingled.





# Los Angeles City Employees' Retirement System

## CREDIT OPPORTUNITIES (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Credit Opportunities</b>	<b>1,879,011,306</b>	<b>100.00</b>	<b>-0.40</b>	<b>--</b>	<b>0.81</b>	<b>--</b>	<b>6.80</b>	<b>--</b>	<b>5.41</b>	<b>--</b>	<b>4.97</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>5.13</b>	<b>Jun-13</b>
<i>Credit Opportunities Blend<sup>1</sup></i>			<i>-0.57</i>	<i>--</i>	<i>1.53</i>	<i>--</i>	<i>7.84</i>	<i>--</i>	<i>6.16</i>	<i>--</i>	<i>5.41</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>5.82</i>	<i>Jun-13</i>
Over/Under			0.17		-0.72		-1.04		-0.75		-0.44				-0.69	
PGIM Blended <sup>2</sup>	500,635,482	26.64	-1.55	67	--	--	--	--	--	--	--	--	--	--	-2.69	Feb-21
<i>50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified</i>			<i>-1.91</i>	<i>71</i>	<i>-3.88</i>	<i>75</i>	<i>3.52</i>	<i>82</i>	<i>4.70</i>	<i>67</i>	<i>3.02</i>	<i>69</i>	<i>3.47</i>	<i>66</i>	<i>-2.84</i>	<i>Feb-21</i>
Over/Under			0.36												0.15	
<i>eV All Emg Mkts Fixed Inc Net Median</i>			<i>-0.89</i>		<i>-1.44</i>		<i>5.44</i>		<i>5.69</i>		<i>3.97</i>		<i>5.02</i>		<i>-0.55</i>	<i>Feb-21</i>
Wellington <sup>2</sup>	497,562,288	26.48	-1.80	70	--	--	--	--	--	--	--	--	--	--	-2.45	Feb-21
<i>50% JPM EMBI Global Diversified/ 50% JPM GBI-EM Global Diversified</i>			<i>-1.91</i>	<i>71</i>	<i>-3.88</i>	<i>75</i>	<i>3.52</i>	<i>82</i>	<i>4.70</i>	<i>67</i>	<i>3.02</i>	<i>69</i>	<i>3.47</i>	<i>66</i>	<i>-2.84</i>	<i>Feb-21</i>
Over/Under			0.11												0.39	
<i>eV All Emg Mkts Fixed Inc Net Median</i>			<i>-0.89</i>		<i>-1.44</i>		<i>5.44</i>		<i>5.69</i>		<i>3.97</i>		<i>5.02</i>		<i>-0.55</i>	<i>Feb-21</i>
Bain Capital Senior Loan Fund, LP	242,713,106	12.92	1.54	11	6.20	11	11.11	7	5.24	4	5.28	7	--	--	4.71	Jun-15
<i>Credit Suisse Leveraged Loans</i>			<i>1.13</i>	<i>22</i>	<i>4.65</i>	<i>27</i>	<i>8.46</i>	<i>28</i>	<i>4.09</i>	<i>24</i>	<i>4.64</i>	<i>16</i>	<i>5.04</i>	<i>25</i>	<i>4.36</i>	<i>Jun-15</i>
Over/Under			0.41		1.55		2.65		1.15		0.64				0.35	
<i>eV US Float-Rate Bank Loan Fixed Inc Net Median</i>			<i>0.98</i>		<i>4.00</i>		<i>7.60</i>		<i>3.51</i>		<i>4.02</i>		<i>4.50</i>		<i>3.84</i>	<i>Jun-15</i>

1 - Credit Opportunities Blend = 20.7% Bloomberg US High Yield 2% Issuer Cap + 20.7% Credit Suisse Leveraged Loan Index + 55% Emerging Markets Debt Blend + 3.6% Credit Suisse Leveraged Loan Index (One Quarter Lagged).

2 - Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

Benchmark composition as of 7/1/2021 unless otherwise noted.

eV= eVestment Alliance

\* Net of fee return since vehicle is commingled.



# Los Angeles City Employees' Retirement System

## CREDIT OPPORTUNITIES (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
DDJ Capital Management <sup>1</sup>	301,327,369	16.04	1.34	7	5.47	24	--	--	--	--	--	--	--	--	9.84	Nov-20
50% BBgBarc US High Yield 2% Issuer Cap / 50% Credit Suisse Leveraged Loan Index			<u>1.01</u>	19	<u>4.60</u>	41	<u>9.87</u>	62	--	--	--	--	--	--	<u>9.50</u>	Nov-20
Over/Under			0.33		0.87										0.34	
eV US High Yield Fixed Inc Net Median			0.77		4.21		10.38		6.37		5.98		6.84		9.93	Nov-20
Loomis Sayles & Co. High Yield <sup>1</sup>	302,414,270	16.09	0.59	76	4.00	62	--	--	--	--	--	--	--	--	11.07	Nov-20
Bloomberg US High Yield 2% Issuer Cap TR			<u>0.89</u>	29	<u>4.54</u>	42	<u>11.27</u>	34	<u>6.89</u>	30	<u>6.50</u>	29	<u>7.42</u>	19	<u>10.73</u>	Nov-20
Over/Under			-0.30		-0.54										0.34	
eV US High Yield Fixed Inc Net Median			0.77		4.21		10.38		6.37		5.98		6.84		9.93	Nov-20
Benefit Street Partners LLC <sup>1</sup>	34,358,784	1.83	0.00	--	0.08	--	--	--	--	--	--	--	--	--	0.08	Dec-20
Credit Suisse Leveraged Loan Qtr Lag			<u>1.44</u>	--	<u>7.24</u>	--	<u>11.67</u>	--	<u>4.36</u>	--	<u>5.04</u>	--	<u>4.52</u>	--	<u>7.98</u>	Dec-20
Over/Under			-1.44		-7.16										-7.90	

1 - Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

eV= eVestment Alliance

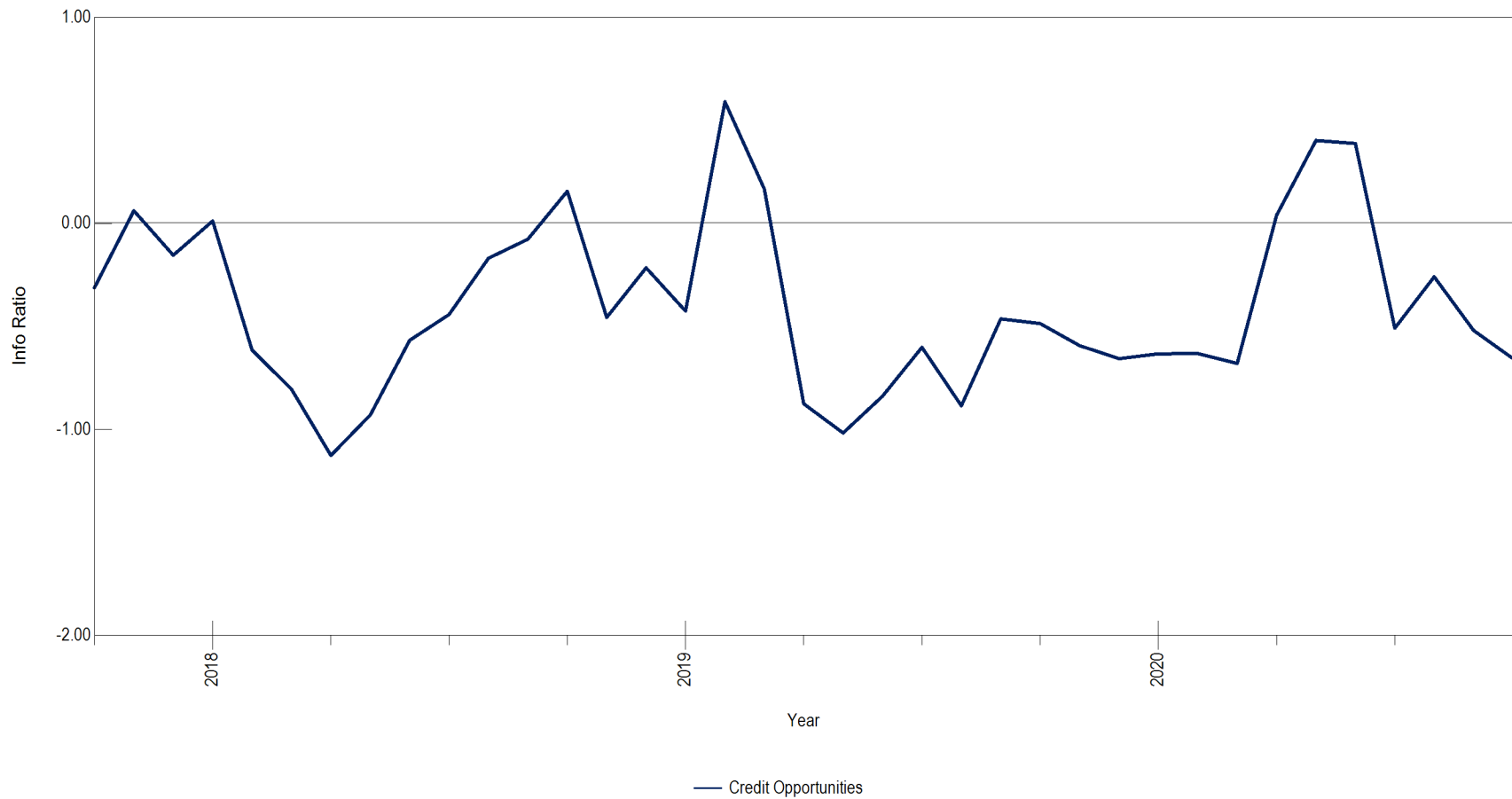
\* Net of fee return since vehicle is commingled.



# Los Angeles City Employees' Retirement System

## CREDIT OPPORTUNITIES ROLLING 3 YEAR

Rolling 3 Year Information Ratio



\*Returns are net of fees



# INVESTMENT MANAGER REPORT CARD

## CREDIT OPPORTUNITIES

Credit Opportunities Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
			PGIM	Feb-21	Emerging Market Debt Blended	✓	*	N/A	N/A	N/A	N/A		
Wellington	Feb-21	Emerging Market Debt Blended	✓	*	N/A	N/A	N/A	N/A	N/A	N/A	✓	882.3	Newly hired manager.
Bain	Jun-15	Bank Loans	✓	✓	✓	✓	✓	✓	✓	✓	✓	876.9	Performance compliant with LACERS' Manager Monitoring Policy
Benefit Street Partners	Dec-20	Private Credit	*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Newly hired manager.
Loomis Sayles	Nov-20	High Yield	*	*	N/A	N/A	N/A	N/A	N/A	N/A	✓	654.2	Newly hired manager.
DDJ	Oct-21	High Yield/Bank Loan	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	✓	861.6	Newly hired manager.

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2021.
- \* Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
*	Underperformed
=	Equal to
✓✓	Gross Return



# REAL ASSETS MANAGER PERFORMANCE



# Los Angeles City Employees' Retirement System

## REAL ASSETS (GROSS)

	Market Value (\$)	% of Portfolio	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Real Assets</b>	<b>2,670,728,919</b>	<b>100.00</b>	<b>1.97</b>	<b>8.83</b>	<b>12.02</b>	<b>6.55</b>	<b>5.79</b>	<b>7.42</b>	<b>6.33</b>	<b>Nov-94</b>
Real Assets Policy Benchmark <sup>1</sup>			3.16	10.24	11.67	8.27	7.91	7.25	--	Nov-94
Over/Under			-1.19	-1.41	0.35	-1.72	-2.12	0.17		
<b>Public Real Assets</b>	<b>1,733,301,828</b>	<b>64.90</b>	<b>1.72</b>	<b>10.23</b>	<b>14.97</b>	<b>8.62</b>	<b>5.36</b>	<b>--</b>	<b>3.99</b>	<b>Jun-14</b>
Public Real Assets Blend <sup>2</sup>			1.22	12.89	20.74	7.56	4.76	--	2.26	Jun-14
Over/Under			0.50	-2.66	-5.77	1.06	0.60		1.73	
<b>TIPS</b>	<b>1,280,016,547</b>	<b>47.93</b>	<b>2.04</b>	<b>3.65</b>	<b>5.40</b>	<b>8.04</b>	<b>4.59</b>	<b>--</b>	<b>3.66</b>	<b>Jul-14</b>
Bloomberg US TIPS TR			1.75	3.51	5.19	7.45	4.34	3.12	3.50	Jul-14
Over/Under			0.29	0.14	0.21	0.59	0.25		0.16	
DFA US TIPS <sup>3</sup>	1,280,016,547	47.93	2.04	3.65	5.40	8.04	4.59	--	3.76	Aug-14
Bloomberg US TIPS TR			1.75	3.51	5.19	7.45	4.34	3.12	3.50	Aug-14
Over/Under			0.29	0.14	0.21	0.59	0.25		0.26	
<b>REITS</b>	<b>453,285,270</b>	<b>16.97</b>	<b>0.75</b>	<b>23.95</b>	<b>34.98</b>	<b>14.59</b>	<b>10.26</b>	<b>--</b>	<b>10.33</b>	<b>Mar-15</b>
FTSE NAREIT All Equity REIT			0.23	21.63	31.53	11.73	8.41	12.13	8.14	Mar-15
Over/Under			0.52	2.32	3.45	2.86	1.85		2.19	
CenterSquare US Real Estate <sup>3</sup>	453,285,270	16.97	0.75	23.95	34.98	14.59	10.26	--	11.00	May-15
FTSE NAREIT All Equity REIT			0.23	21.63	31.53	11.73	8.41	12.13	9.11	May-15
Over/Under			0.52	2.32	3.45	2.86	1.85		1.89	
<b>Private Real Estate</b>	<b>919,173,966</b>	<b>34.42</b>	<b>2.53</b>	<b>7.36</b>	<b>8.31</b>	<b>3.68</b>	<b>5.61</b>	<b>8.07</b>	<b>6.56</b>	<b>Oct-94</b>
Real Estate Blend <sup>4</sup>			6.80	13.78	15.49	7.90	8.35	10.44	9.74	Oct-94
Over/Under			-4.27	-6.42	-7.18	-4.22	-2.74	-2.37	-3.18	
<b>Timber</b>	<b>18,253,125</b>	<b>0.68</b>	<b>0.28</b>	<b>2.72</b>	<b>0.86</b>	<b>2.66</b>	<b>2.51</b>	<b>5.28</b>	<b>8.64</b>	<b>Sep-99</b>

1 - Real Assets Policy Benchmark = 41.67% Bloomberg US TIPS Index + 25% FTSE NAREIT ALL Equity REIT Index + 33.33% Real Estate Blended Benchmark

2 - Public Real Assets Blend = 62.5% Bloomberg US TIPS Index + 37.5% FTSE NAREIT ALL Equity REIT Index

3 - Portfolio has a mid-month inception date. Since inception return is calculated from the first full month of performance.

4 - Real Estate Blend = NCREIF-ODCE + 80bps 7/1/2014 to present; NCREIF Property Index 1 Qtr Lag plus 100bps 7/1/2012 - 6/30/2014; NCREIF Property Index Inception - 6/30/2012

Benchmark composition as of 7/1/2021 unless otherwise noted.



# Los Angeles City Employees' Retirement System

## REAL ASSETS (NET)

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
<b>Real Assets</b>	<b>2,670,728,919</b>	<b>100.00</b>	<b>1.94</b>	<b>63</b>	<b>8.72</b>	<b>79</b>	<b>11.87</b>	<b>71</b>	<b>6.39</b>	<b>47</b>	<b>5.63</b>	<b>42</b>	<b>7.27</b>	<b>29</b>	--	<b>Nov-94</b>
<i>Real Assets Policy Benchmark<sup>1</sup></i>			3.16	42	10.24	68	11.67	72	8.27	25	7.91	9	7.25	30	--	Nov-94
Over/Under			-1.22		-1.52		0.20		-1.88		-2.28		0.02			
<i>InvMetrics Public DB &gt; \$1 Billion</i>																
<i>Real Assets/Commodities Net Median</i>			2.76		11.29		16.29		5.89		5.27		5.34		--	Nov-94
<b>Public Real Assets</b>	<b>1,733,301,828</b>	<b>64.90</b>	<b>1.69</b>	<b>--</b>	<b>10.09</b>	<b>--</b>	<b>14.78</b>	<b>--</b>	<b>8.41</b>	<b>--</b>	<b>5.13</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.78</b>	<b>Jun-14</b>
<i>Public Real Assets Blend<sup>2</sup></i>			1.22	--	12.89	--	20.74	--	7.56	--	4.76	--	--	--	2.26	Jun-14
Over/Under			0.47		-2.80		-5.96		0.85		0.37				1.52	
<b>TIPS</b>	<b>1,280,016,547</b>	<b>47.93</b>	<b>2.03</b>	<b>--</b>	<b>3.62</b>	<b>--</b>	<b>5.35</b>	<b>--</b>	<b>7.99</b>	<b>--</b>	<b>4.54</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>3.61</b>	<b>Jul-14</b>
<i>Bloomberg US TIPS TR</i>			1.75	--	3.51	--	5.19	--	7.45	--	4.34	--	3.12	--	3.50	Jul-14
Over/Under			0.28		0.11		0.16		0.54		0.20				0.11	
<b>DFA US TIPS<sup>3</sup></b>	<b>1,280,016,547</b>	<b>47.93</b>	<b>2.03</b>	<b>7</b>	<b>3.62</b>	<b>45</b>	<b>5.35</b>	<b>46</b>	<b>7.99</b>	<b>14</b>	<b>4.54</b>	<b>49</b>	<b>--</b>	<b>--</b>	<b>3.71</b>	<b>Aug-14</b>
<i>Bloomberg US TIPS TR</i>			1.75	31	3.51	47	5.19	63	7.45	33	4.34	60	3.12	47	3.50	Aug-14
Over/Under			0.28		0.11		0.16		0.54		0.20				0.21	
<i>eV US TIPS / Inflation Fixed Inc Net Median</i>			1.63		3.47		5.32		7.28		4.52		3.09		3.41	Aug-14
<b>REITS</b>	<b>453,285,270</b>	<b>16.97</b>	<b>0.68</b>	<b>--</b>	<b>23.63</b>	<b>--</b>	<b>34.50</b>	<b>--</b>	<b>14.14</b>	<b>--</b>	<b>9.80</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>9.88</b>	<b>Mar-15</b>
<i>FTSE NAREIT All Equity REIT</i>			0.23	--	21.63	--	31.53	--	11.73	--	8.41	--	12.13	--	8.14	Mar-15
Over/Under			0.45		2.00		2.97		2.41		1.39				1.74	
<b>CenterSquare US Real Estate<sup>3</sup></b>	<b>453,285,270</b>	<b>16.97</b>	<b>0.68</b>	<b>72</b>	<b>23.63</b>	<b>34</b>	<b>34.50</b>	<b>49</b>	<b>14.14</b>	<b>27</b>	<b>9.80</b>	<b>20</b>	<b>--</b>	<b>--</b>	<b>10.54</b>	<b>May-15</b>
<i>FTSE NAREIT All Equity REIT</i>			0.23	84	21.63	65	31.53	76	11.73	65	8.41	47	12.13	50	9.11	May-15
Over/Under			0.45		2.00		2.97		2.41		1.39				1.43	
<i>eV US REIT Net Median</i>			1.16		22.37		34.14		12.66		8.09		12.12		8.92	May-15
<b>Private Real Estate</b>	<b>919,173,966</b>	<b>34.42</b>	<b>2.50</b>	<b>91</b>	<b>7.28</b>	<b>88</b>	<b>8.21</b>	<b>89</b>	<b>3.59</b>	<b>90</b>	<b>5.52</b>	<b>87</b>	<b>7.96</b>	<b>72</b>	<b>--</b>	<b>Oct-94</b>
<i>Real Estate Blend<sup>4</sup></i>			6.80	3	13.78	10	15.49	14	7.90	8	8.35	7	10.44	19	9.74	Oct-94
Over/Under			-4.30		-6.50		-7.28		-4.31		-2.83		-2.48			
<i>InvMetrics Public DB Real Estate Priv Net Median</i>			5.26		11.31		13.13		6.20		7.15		9.12		7.15	Oct-94
<b>Timber</b>	<b>18,253,125</b>	<b>0.68</b>	<b>0.28</b>	<b>--</b>	<b>2.72</b>	<b>--</b>	<b>0.86</b>	<b>--</b>	<b>2.66</b>	<b>--</b>	<b>2.51</b>	<b>--</b>	<b>5.13</b>	<b>--</b>	<b>--</b>	<b>Sep-99</b>

1 - Real Assets Policy Benchmark = 41.67% Bloomberg US TIPS Index + 25% FTSE NAREIT ALL Equity REIT Index + 33.33% Real Estate Blended Benchmark

2 - Public Real Assets Blend = 62.5% Bloomberg US TIPS Index + 37.5% FTSE NAREIT ALL Equity REIT Index

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Benchmark composition as of 7/1/2021 unless otherwise noted.



# INVESTMENT MANAGER REPORT CARD

## REAL ASSETS

Real Assets Managers	Inception Date	Mandate	Current Quarter (Net)		One Year (Net)		Three Years (Net)		Five Years (Net)		Since Inception (Net)	Annual Mgt Fee Paid \$ (000)	Comments
			Index	Universe	Index	Universe	Index	Universe	Index	Universe	Index		
DFA	Jul-14	U.S. TIPS	✓	✓	✓	✓	✓	✓	✓	✓	✓	420.3	Performance compliant with LACERS' Manager Monitoring Policy
CenterSquare	Apr-15	REITS	✓	*	✓	✓	✓	✓	✓	✓	✓	1,100.5	Performance compliant with LACERS' Manager Monitoring Policy

Note: Managers are placed on Watch List for concerns with organization, process and performance. Managers are normally on the Watch List for 12 months though may be longer if manager issues remain but not severe enough to warrant termination recommendation.

- Annual Management Fee Paid as of fiscal year ending June 30, 2021.
- \* Where net of fees performance is not available gross of fee returns are evaluated.

Legend	
✓	Outperformed
*	Underperformed
=	Equal to
✓✓	Gross Return





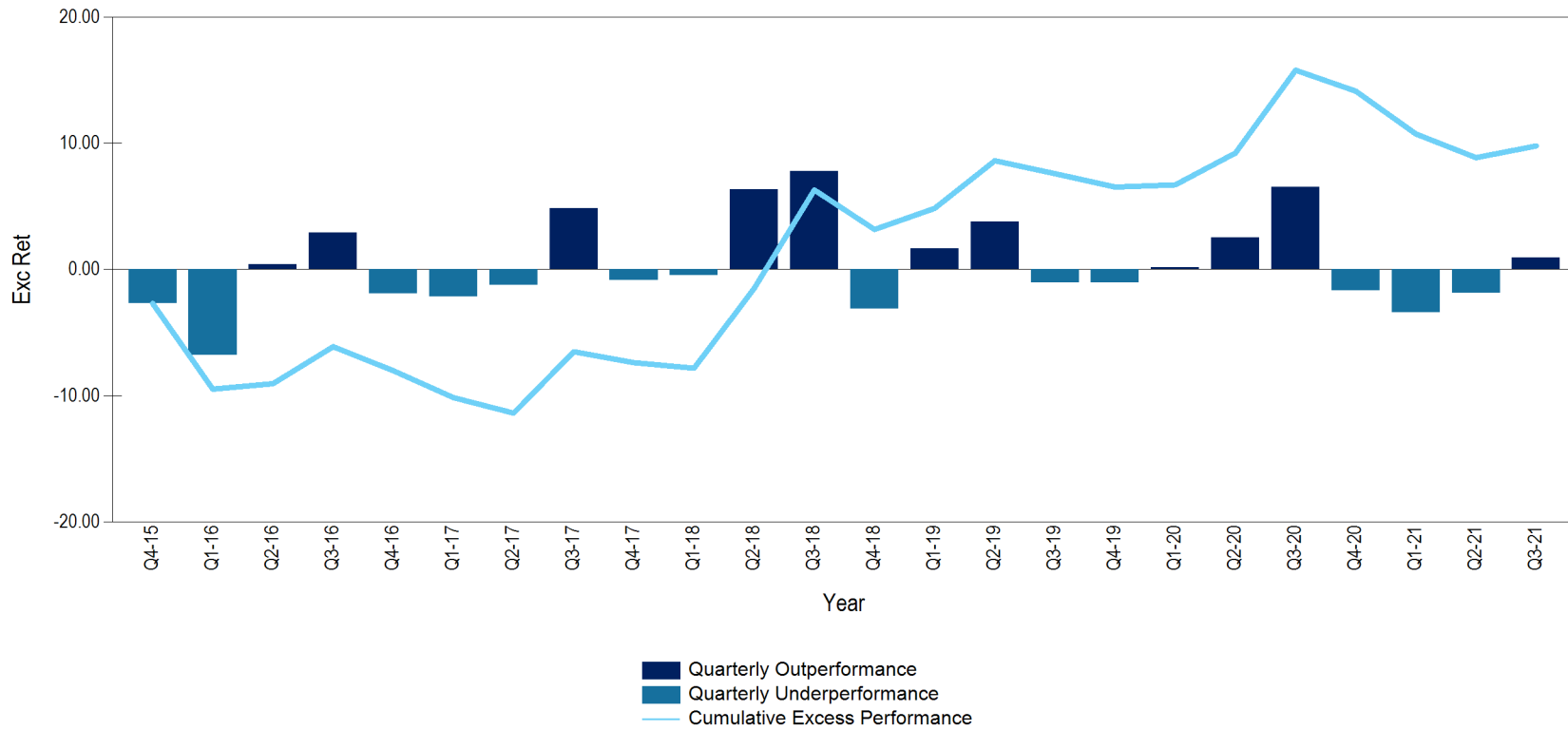


# U.S. EQUITY MANAGER PERFORMANCE

# Los Angeles City Employees' Retirement System

## EAM INVESTORS

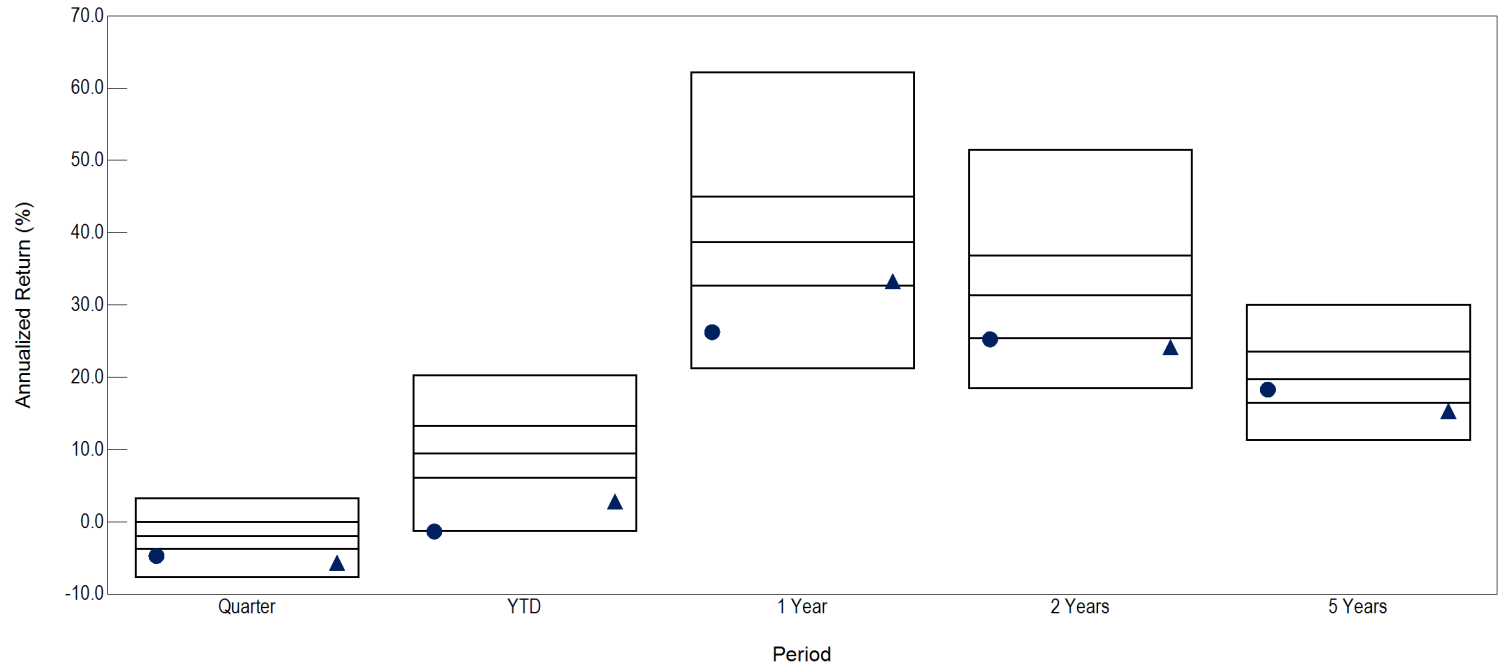
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## EAM INVESTORS

EAM Investors vs. eV US Small Cap Growth Equity Net



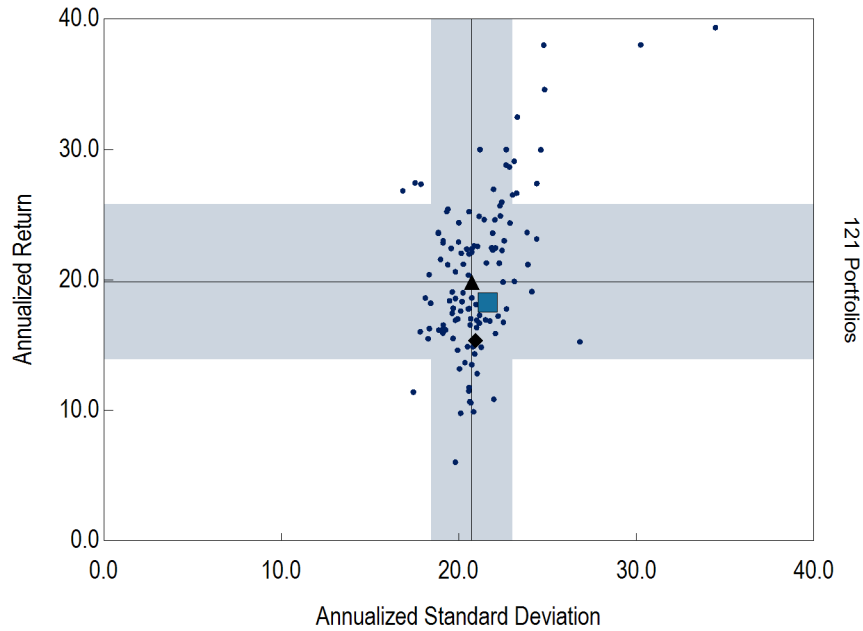
	Return (Rank)									
5th Percentile	3.24		20.25		62.13		51.48		29.99	
25th Percentile	0.07		13.33		45.07		36.90		23.62	
Median	-1.93		9.55		38.76		31.41		19.83	
75th Percentile	-3.62		6.21		32.73		25.47		16.54	
95th Percentile	-7.54		-1.18		21.35		18.55		11.40	
# of Portfolios	129		129		129		128		121	
● EAM Investors	-4.72	(87)	-1.34	(96)	26.23	(93)	25.25	(77)	18.28	(59)
▲ Russell 2000 Growth	-5.65	(90)	2.82	(89)	33.26	(75)	24.18	(82)	15.34	(85)



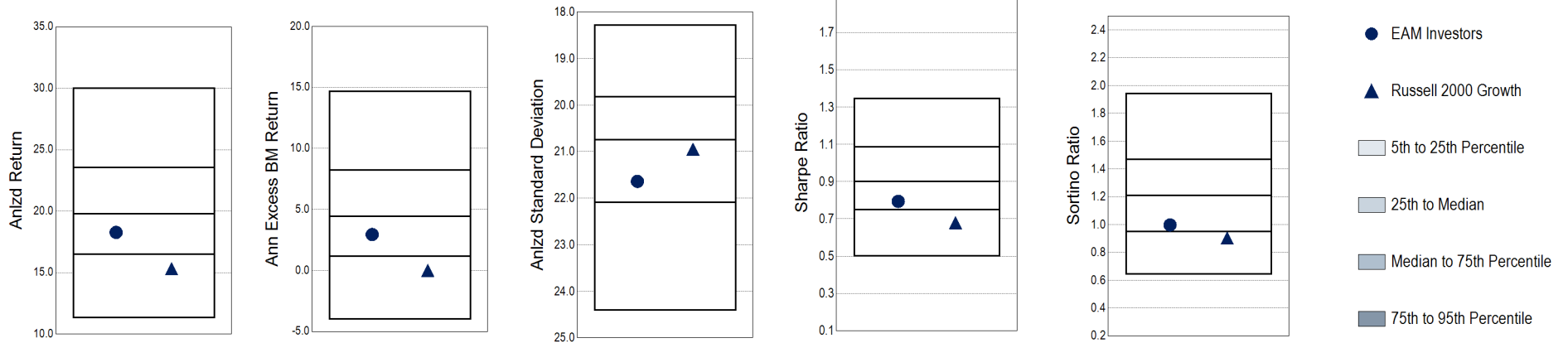
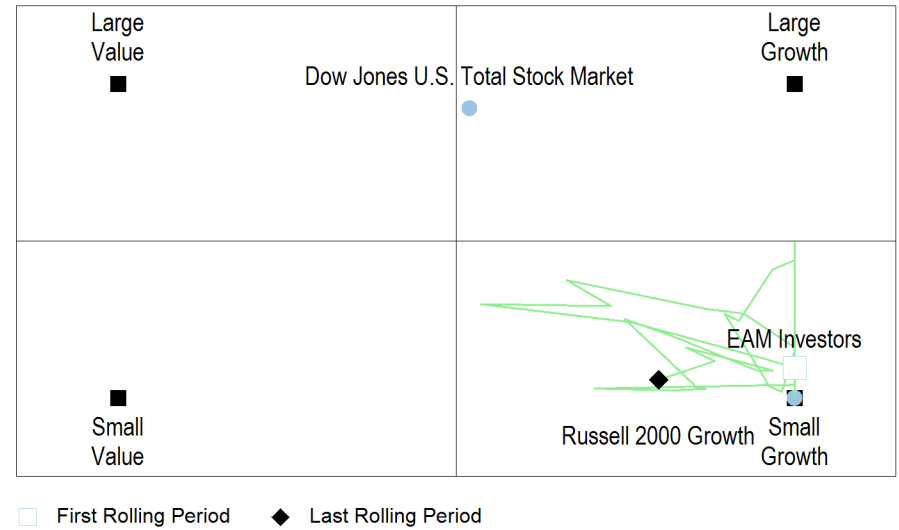
# Los Angeles City Employees' Retirement System

## EAM INVESTORS

5 Years Ending September 30, 2021



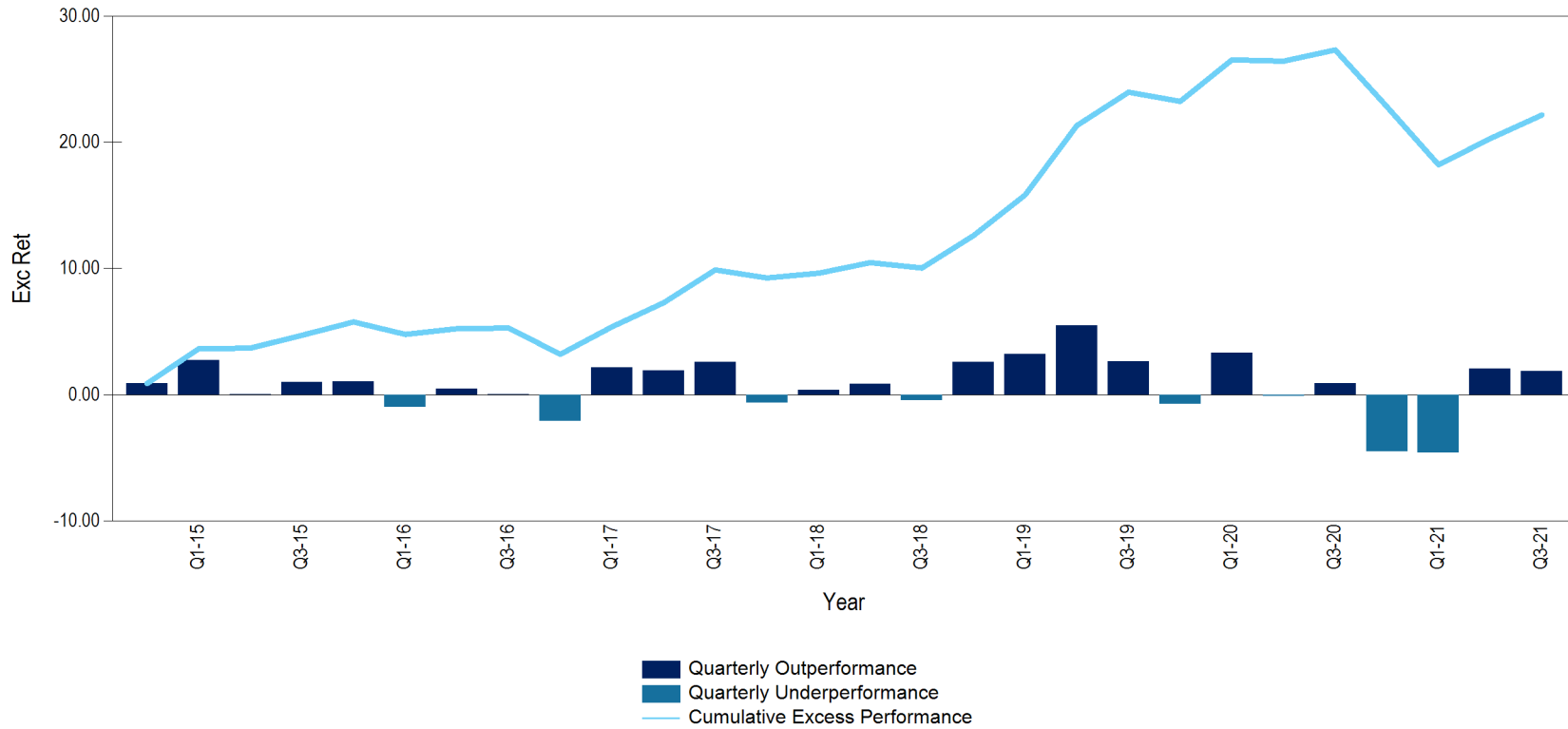
5 Years Ending September 30, 2021



# Los Angeles City Employees' Retirement System

## PRINCIPAL GLOBAL INVESTORS

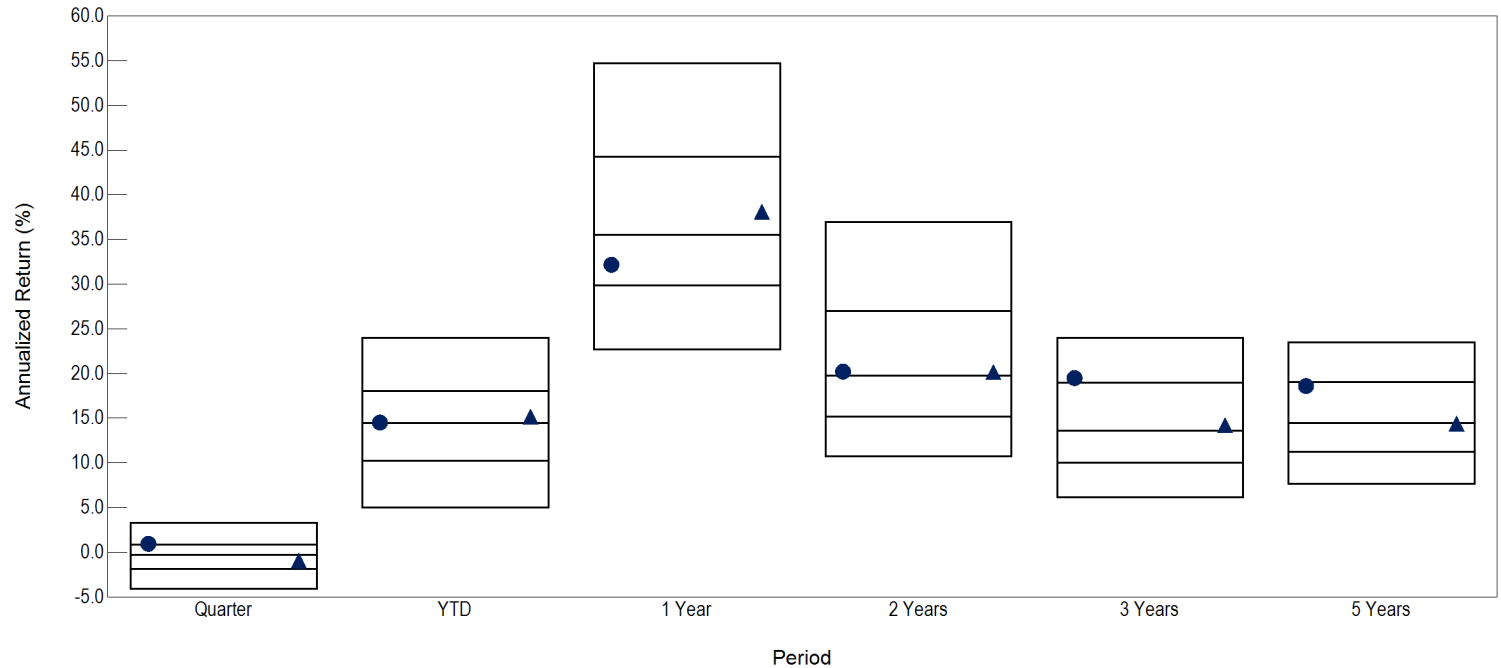
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## PRINCIPAL GLOBAL INVESTORS

Principal Global Investors vs. eV US Mid Cap Equity Net



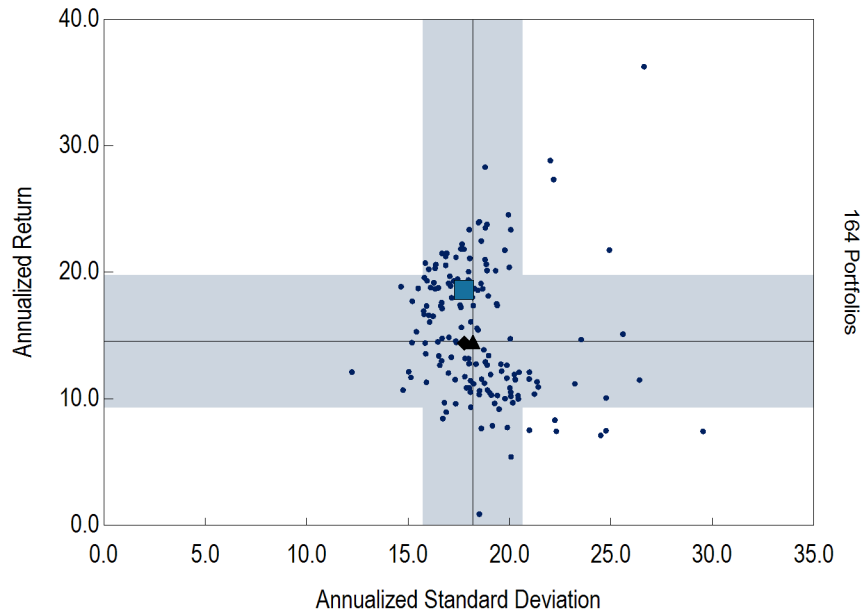
	Return (Rank)											
5th Percentile	3.28		24.01		54.69		36.96		23.99		23.49	
25th Percentile	0.96		18.11		44.30		27.08		19.06		19.13	
Median	-0.25		14.51		35.60		19.82		13.65		14.52	
75th Percentile	-1.80		10.28		29.96		15.25		10.07		11.28	
95th Percentile	-4.03		5.10		22.78		10.83		6.23		7.75	
# of Portfolios	177		177		176		173		172		164	
● Principal Global Investors	0.94	(26)	14.51	(50)	32.17	(64)	20.21	(48)	19.49	(22)	18.60	(32)
▲ Russell MidCap	-0.93	(64)	15.17	(45)	38.11	(43)	20.16	(48)	14.21	(47)	14.39	(53)



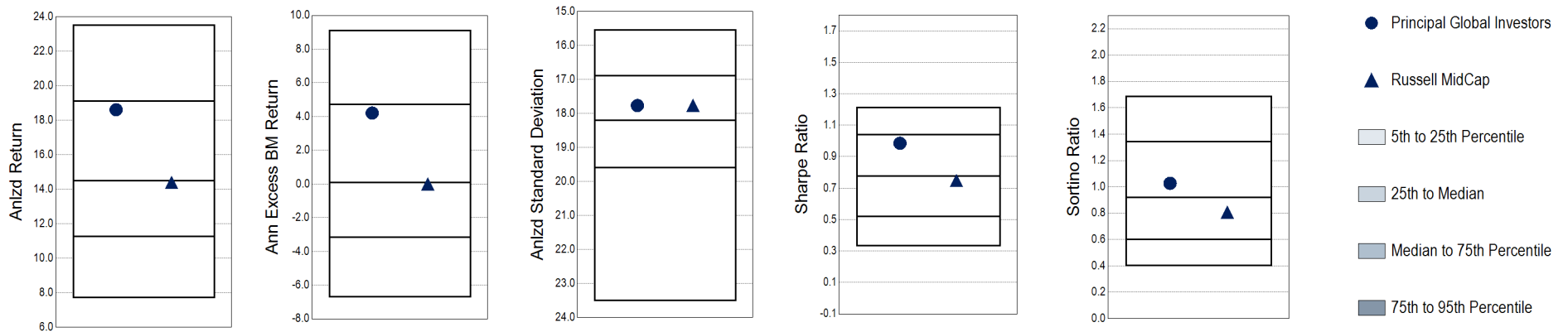
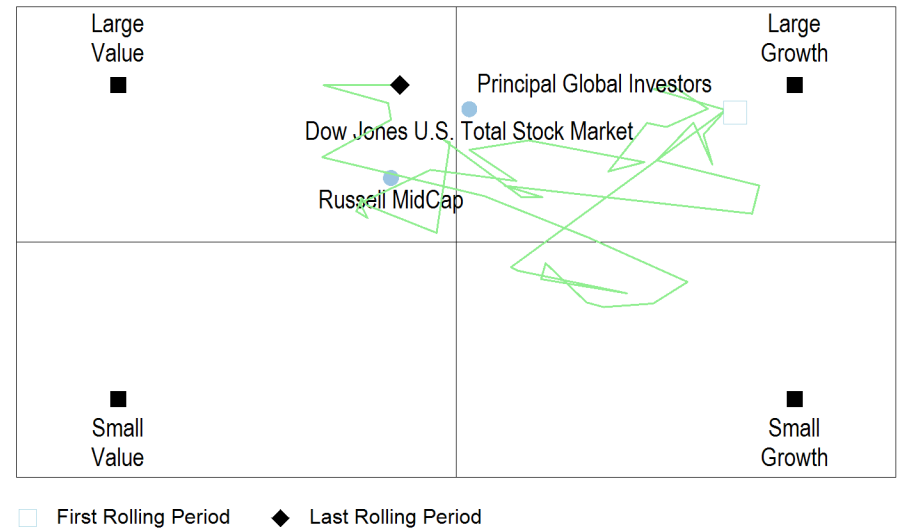
# Los Angeles City Employees' Retirement System

## PRINCIPAL GLOBAL INVESTORS

5 Years Ending September 30, 2021



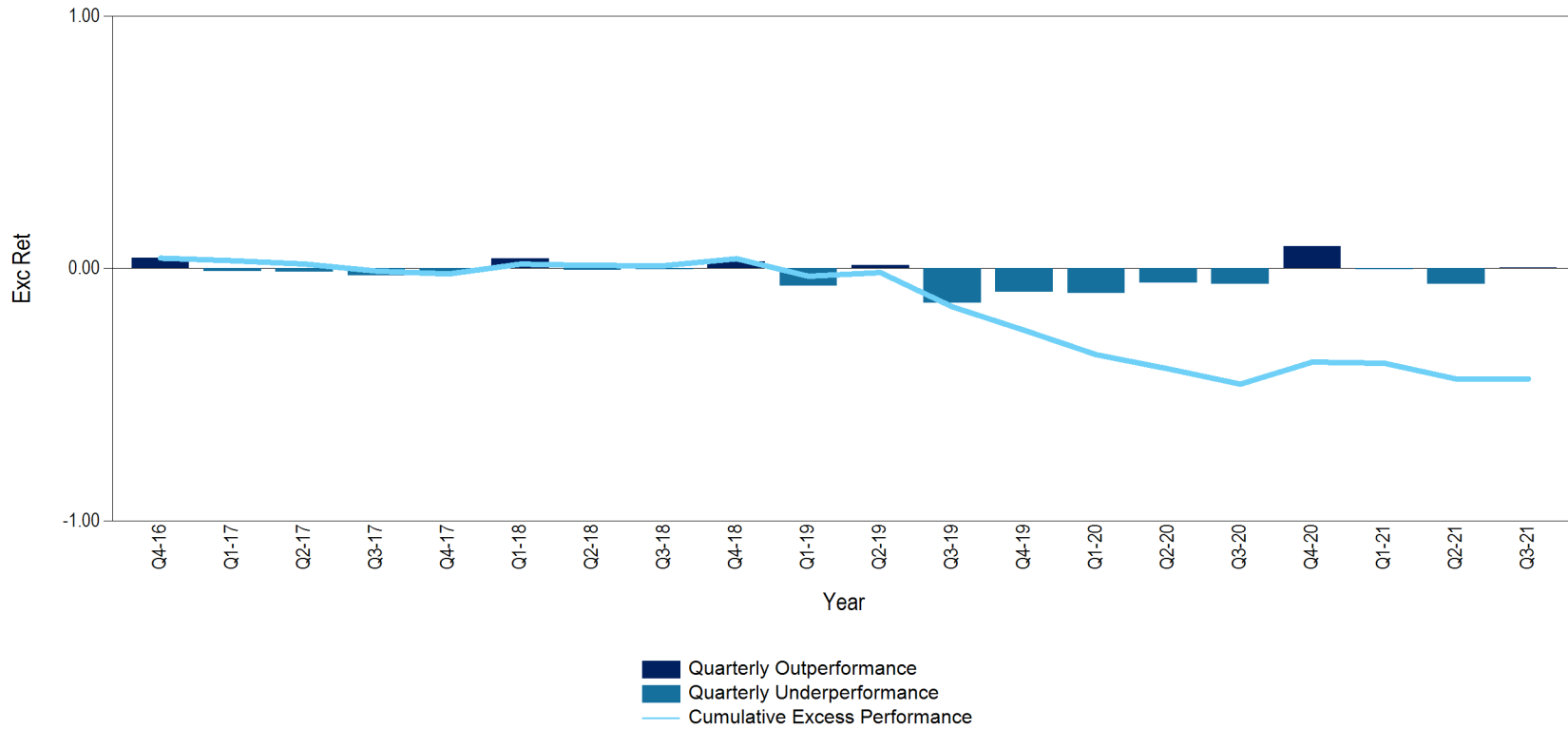
5 Years Ending September 30, 2021



# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS S&P 500

Quarterly and Cumulative Excess Performance

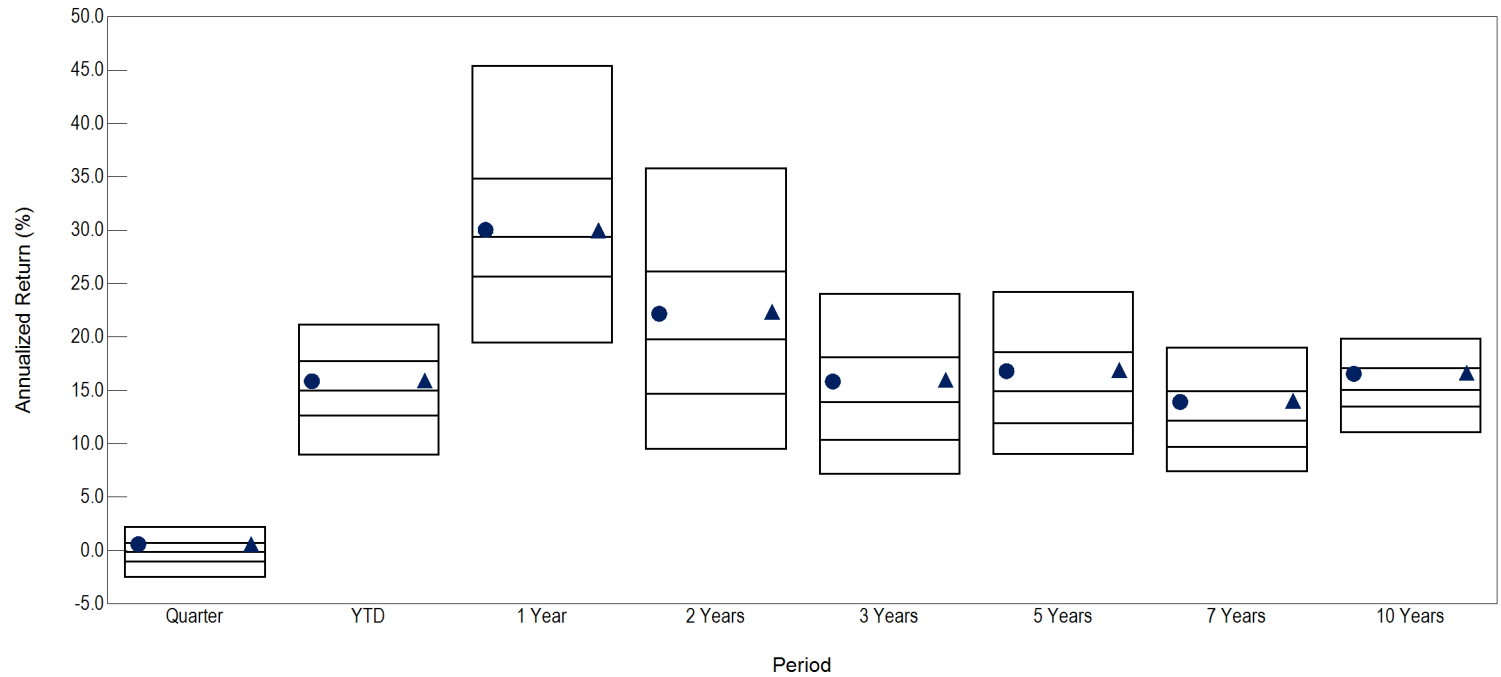




# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS S&P 500

RhumbLine Advisers S&P 500 vs. eV US Large Cap Equity Net



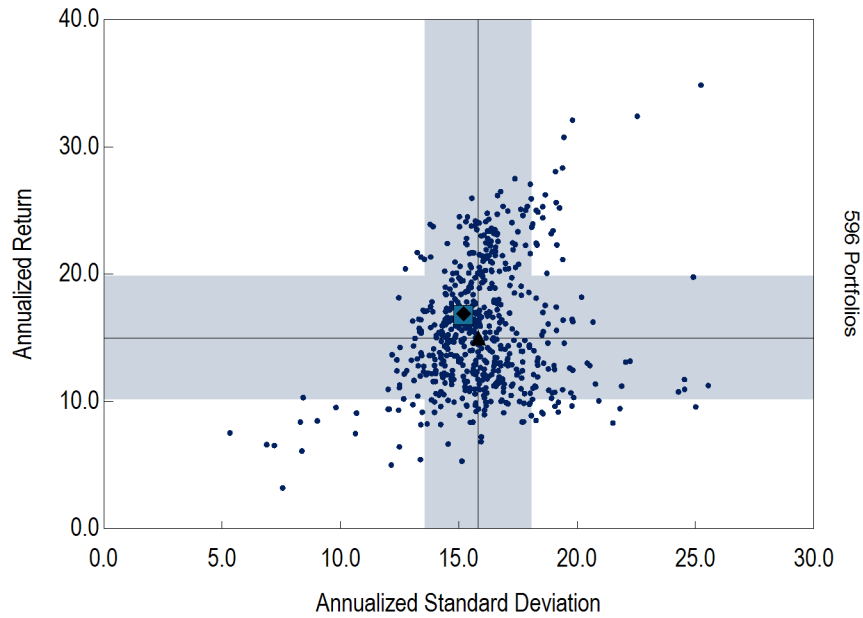
	Return (Rank)															
5th Percentile	2.21	21.13	45.42	35.77	24.02	24.22	19.01	19.83								
25th Percentile	0.74	17.78	34.87	26.20	18.14	18.66	14.99	17.16								
Median	-0.06	15.06	29.41	19.82	13.96	14.99	12.23	15.07								
75th Percentile	-0.99	12.67	25.71	14.76	10.42	11.99	9.74	13.54								
95th Percentile	-2.41	9.02	19.54	9.57	7.23	9.13	7.48	11.13								
# of Portfolios	656	656	655	641	632	596	556	481								
● RhumbLine Advisers S&P 500	0.58	(29)	15.85	(42)	30.03	(47)	22.17	(39)	15.82	(39)	16.79	(35)	13.91	(33)	16.55	(31)
▲ S&P 500	0.58	(29)	15.92	(42)	30.00	(47)	22.35	(38)	15.99	(39)	16.89	(34)	14.01	(32)	16.63	(30)



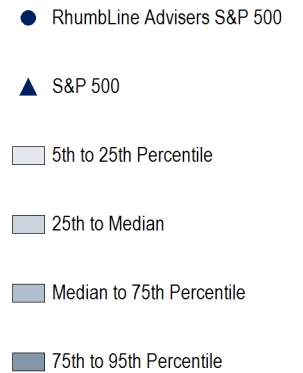
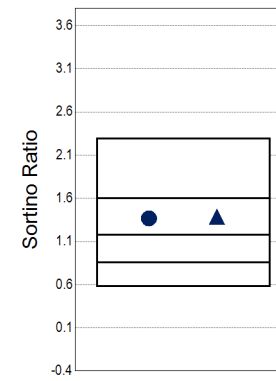
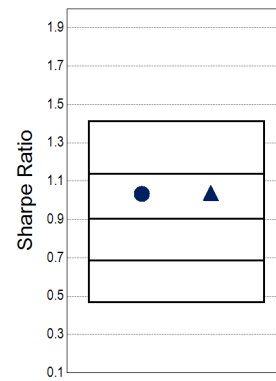
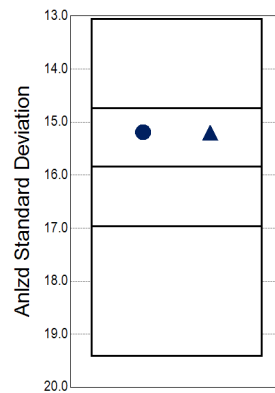
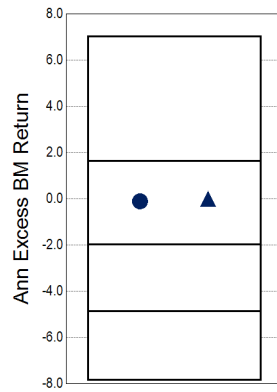
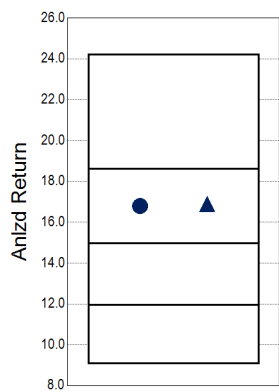
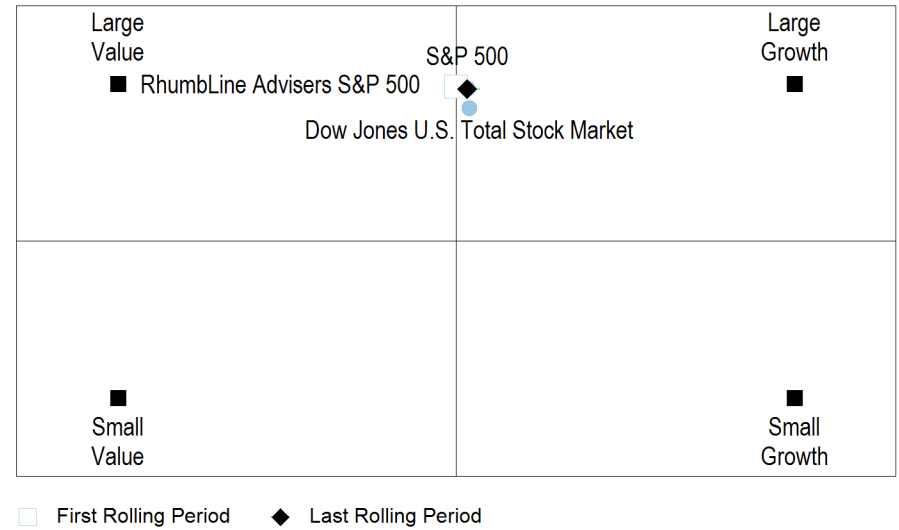
# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS S&P 500

5 Year Risk Return



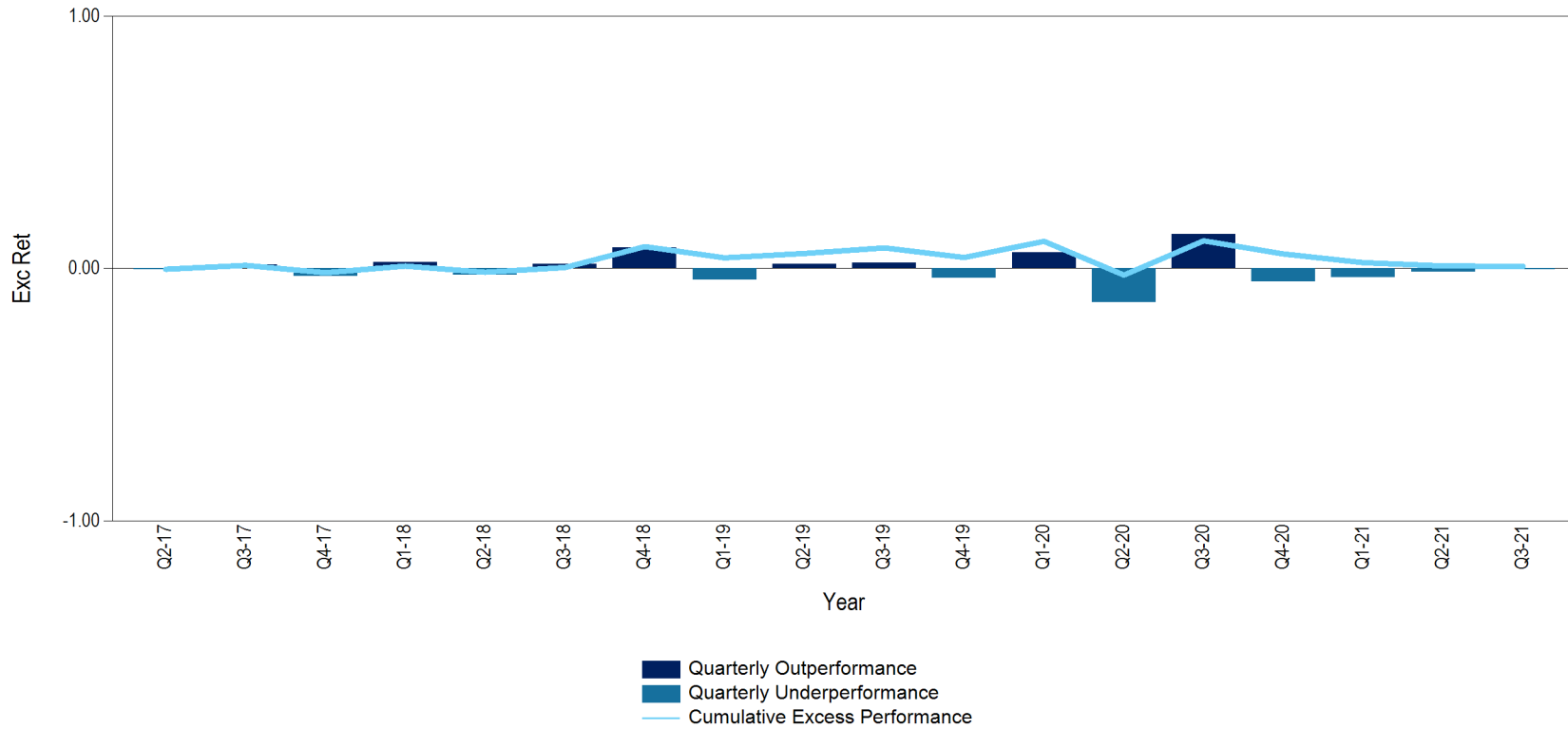
5 Year Style Map



# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS RUSSELL 2000

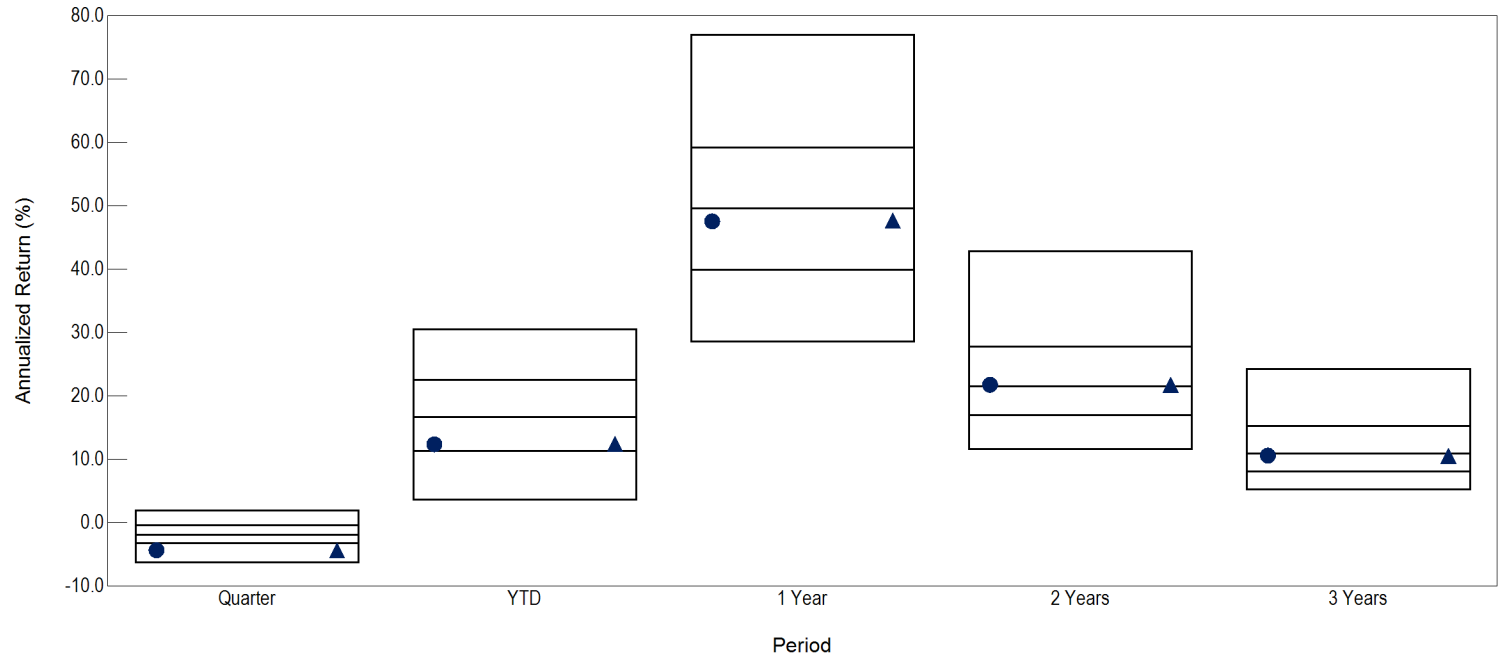
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS RUSSELL 2000

RhumbLine Advisers Russell 2000 vs. eV US Small Cap Equity Net



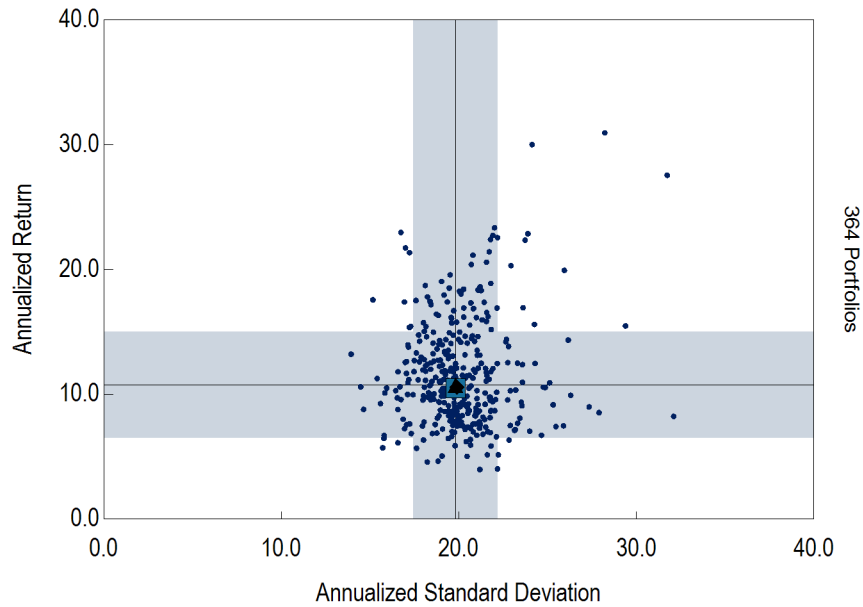
	Return (Rank)									
5th Percentile	1.95		30.51		76.98		42.84		24.26	
25th Percentile	-0.32		22.60		59.35		27.93		15.40	
Median	-1.79		16.79		49.67		21.62		10.98	
75th Percentile	-3.11		11.38		40.02		17.04		8.22	
95th Percentile	-6.14		3.69		28.73		11.73		5.34	
# of Portfolios	414		414		413		409		403	
● RhumbLine Advisers Russell 2000	-4.36	(89)	12.36	(71)	47.55	(58)	21.76	(50)	10.58	(53)
▲ Russell 2000	-4.36	(89)	12.41	(71)	47.68	(58)	21.76	(50)	10.54	(54)



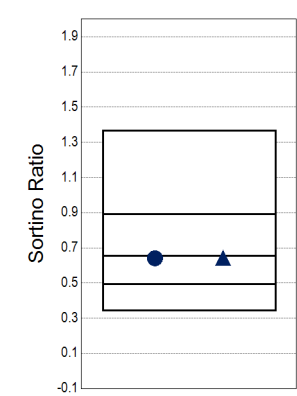
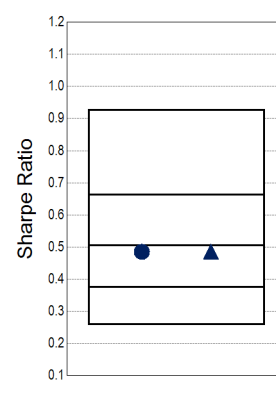
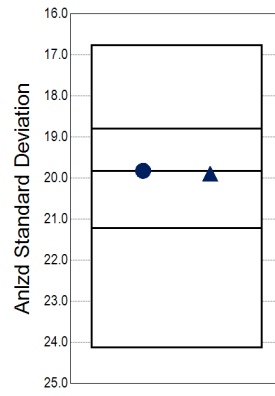
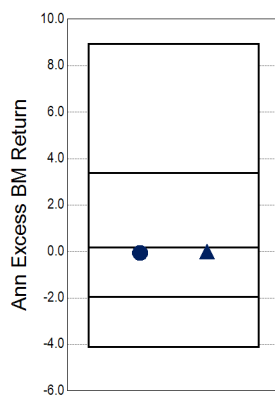
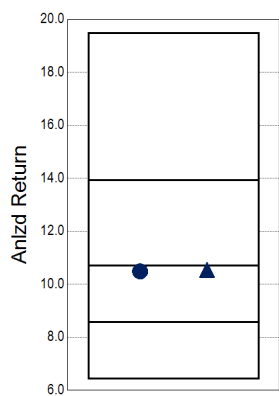
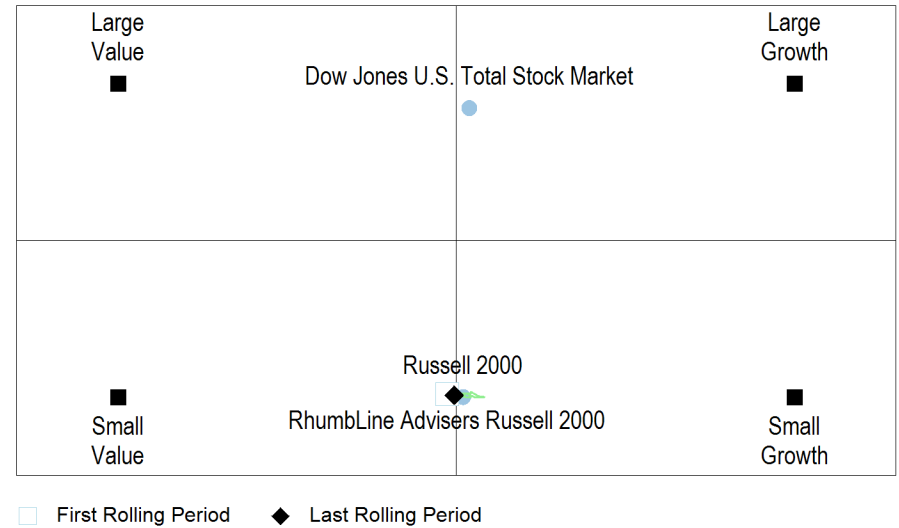
# Los Angeles City Employees' Retirement System

## RHUMBLINE ADVISORS RUSSELL 2000

Since Inception Risk Return



Since Inception Style Map

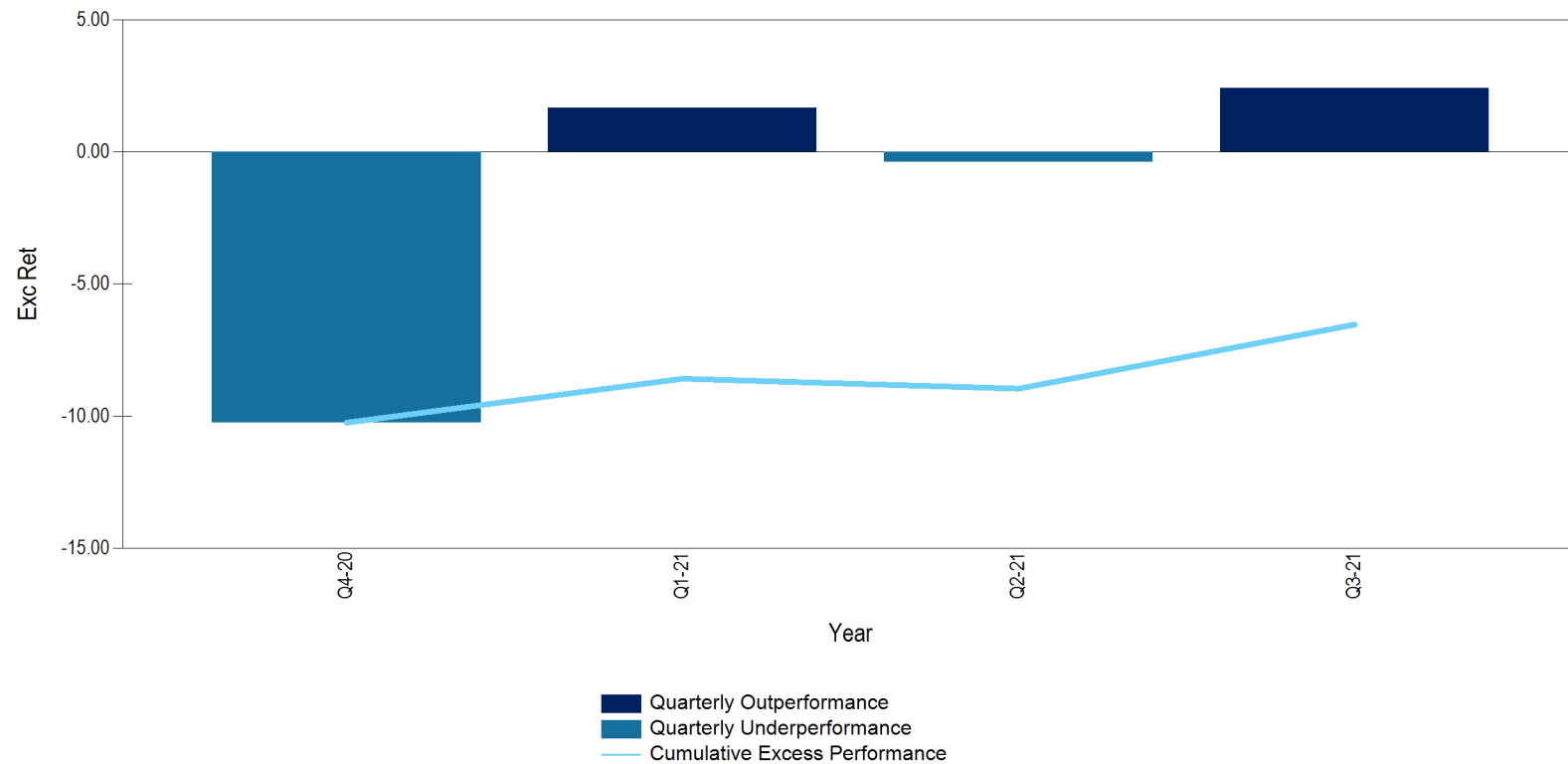


- RhumbLine Advisers Russell 2000
- ▲ Russell 2000
- 5th to 25th Percentile
- ▒ 25th to Median
- ▓ Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System COPELAND CAPITAL MANAGEMENT

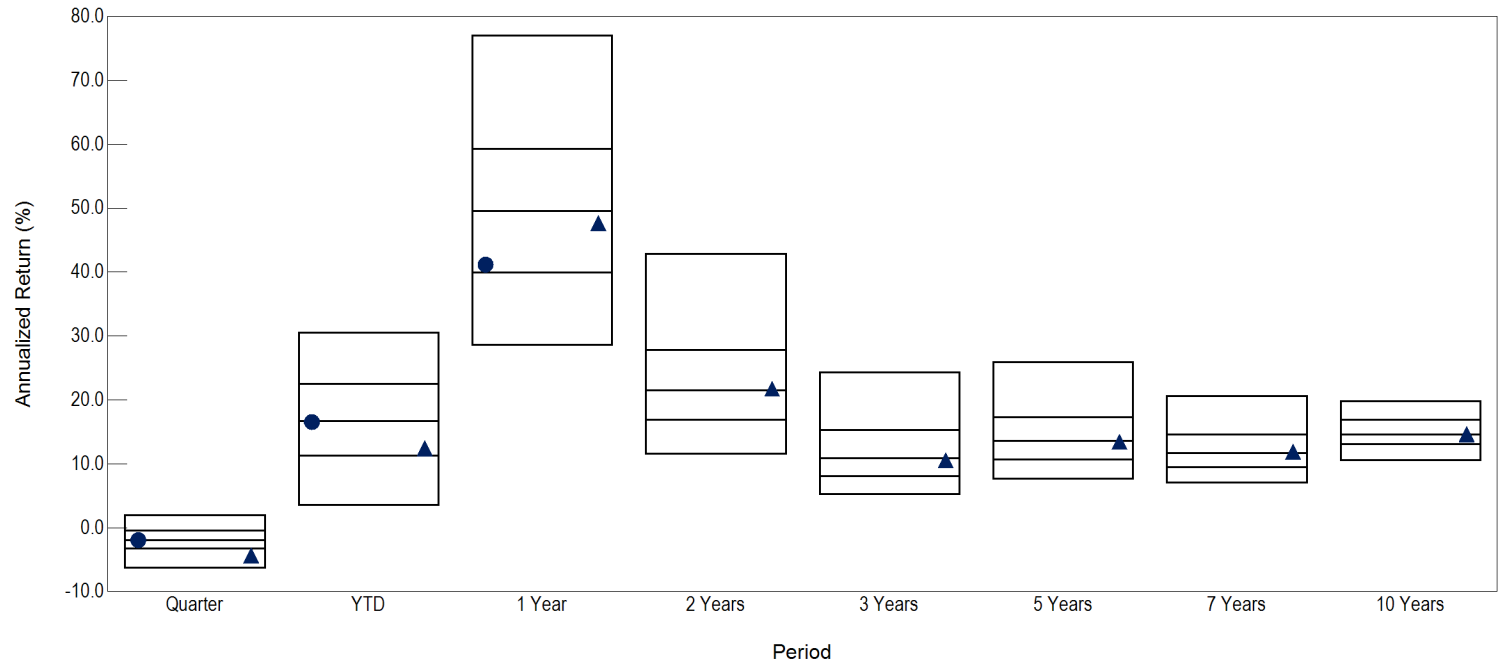
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## COPELAND CAPITAL MANAGEMENT

Copeland Capital Management vs. eV US Small Cap Equity Net

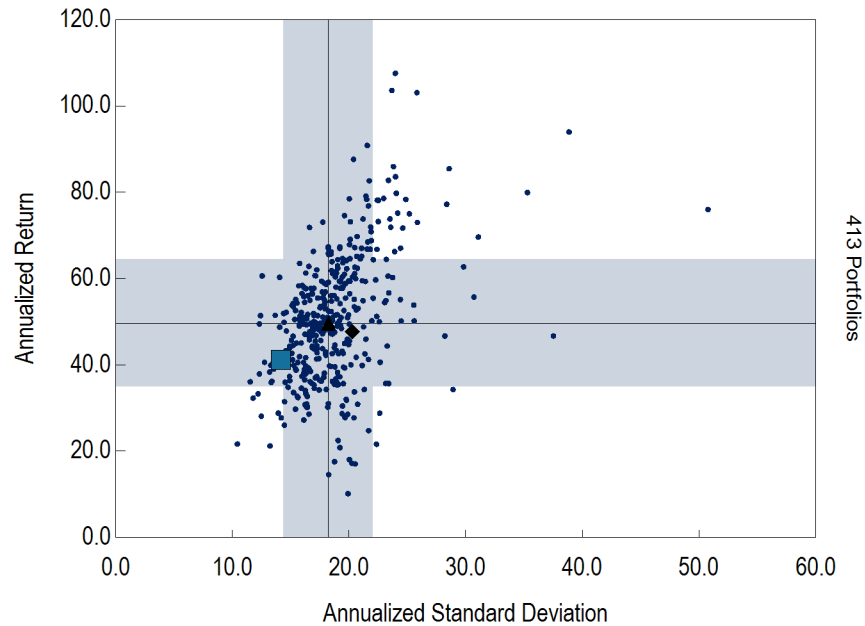


	Return (Rank)															
5th Percentile	1.95	30.51	76.98	42.84	24.26	25.88	20.64	19.81								
25th Percentile	-0.32	22.60	59.35	27.93	15.40	17.36	14.70	16.95								
Median	-1.79	16.79	49.67	21.62	10.98	13.69	11.77	14.70								
75th Percentile	-3.11	11.38	40.02	17.04	8.22	10.83	9.56	13.15								
95th Percentile	-6.14	3.69	28.73	11.73	5.34	7.79	7.22	10.67								
# of Portfolios	414	414	413	409	403	387	356	321								
● Copeland Capital Management	-1.93	(54)	16.54	(51)	41.16	(73)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell 2000	-4.36	(89)	12.41	(71)	47.68	(58)	21.76	(50)	10.54	(54)	13.45	(53)	11.90	(49)	14.63	(52)

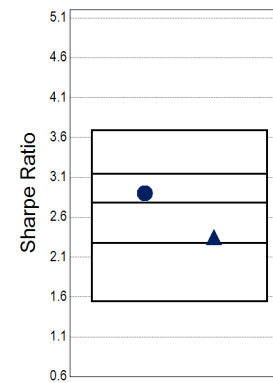
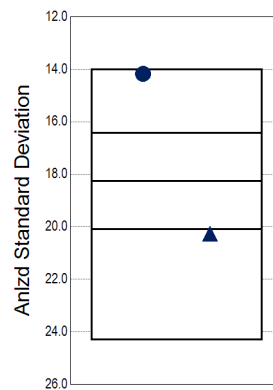
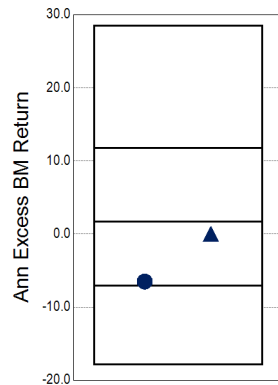
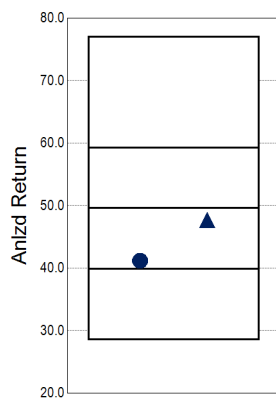
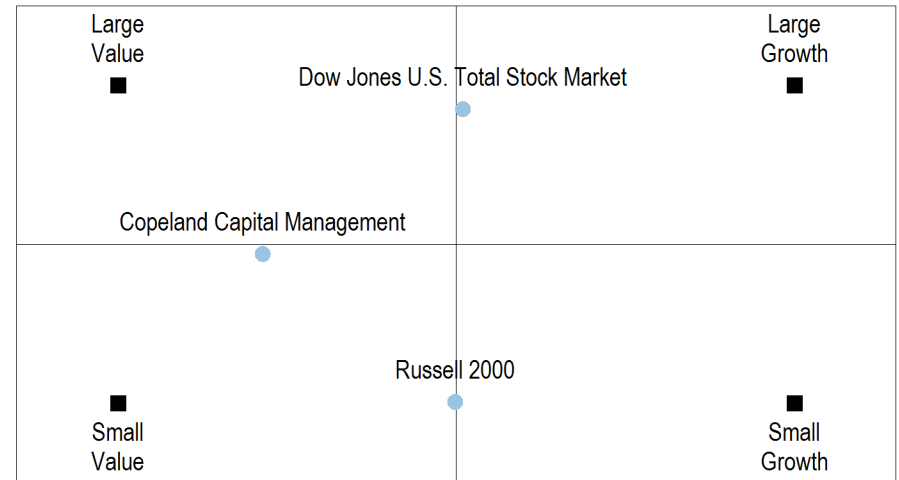


# Los Angeles City Employees' Retirement System COPELAND CAPITAL MANAGEMENT

Since Inception Risk Return



U.S. Effective Style Map  
1 Year Ending September 30, 2021



- Copeland Capital Management
- ▲ Russell 2000
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

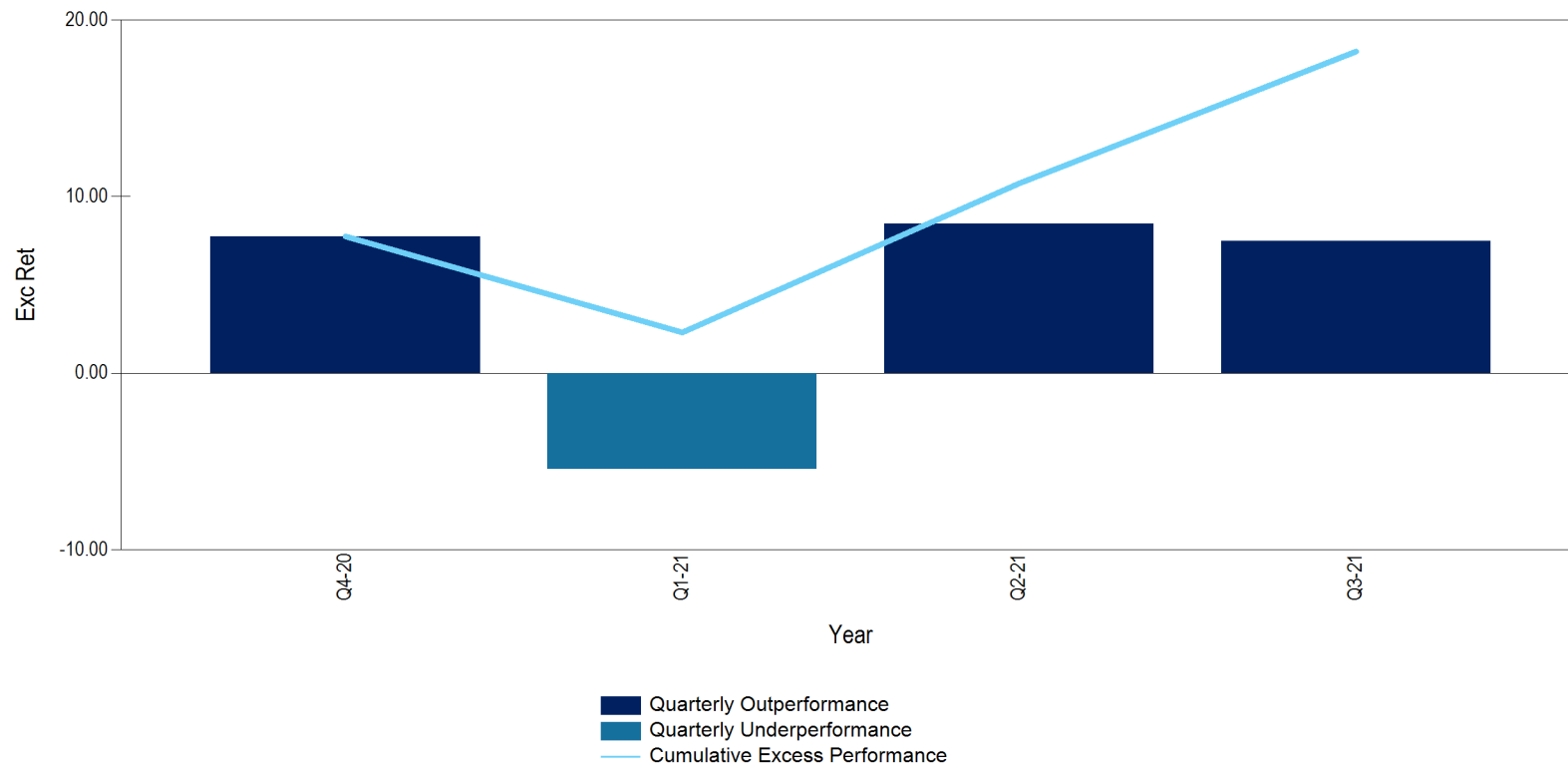




# Los Angeles City Employees' Retirement System

## GRANAHAN INVESTMENT MANAGEMENT

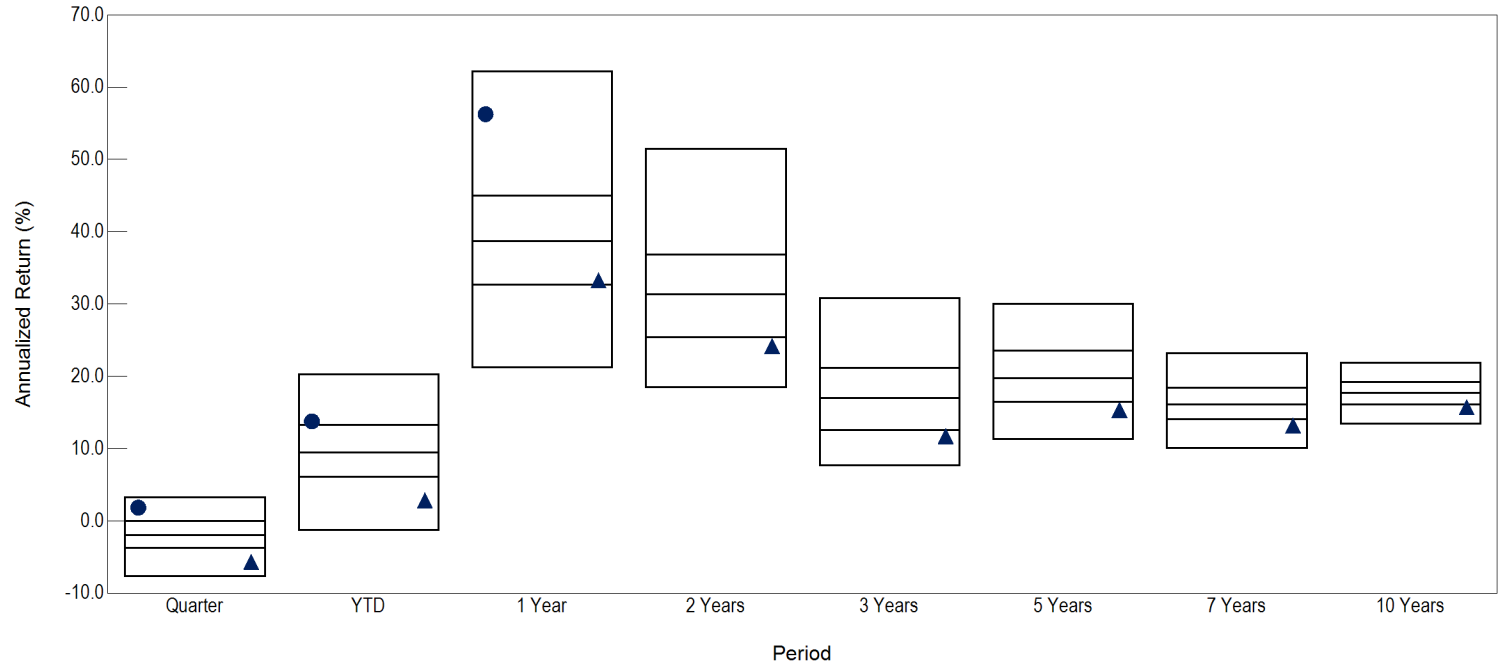
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## GRANAHAN INVESTMENT MANAGEMENT

Granahan Investment Management vs. eV US Small Cap Growth Equity Net



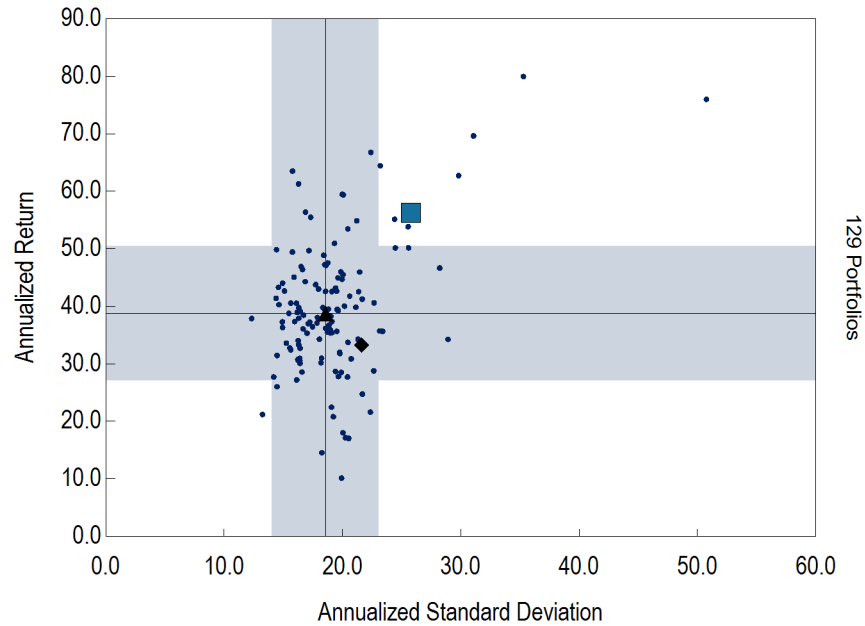
	Return (Rank)													
5th Percentile	3.24	20.25	62.13	51.48	30.85	29.99	23.16	21.89						
25th Percentile	0.07	13.33	45.07	36.90	21.27	23.62	18.53	19.30						
Median	-1.93	9.55	38.76	31.41	17.09	19.83	16.19	17.74						
75th Percentile	-3.62	6.21	32.73	25.47	12.68	16.54	14.18	16.22						
95th Percentile	-7.54	-1.18	21.35	18.55	7.77	11.40	10.13	13.49						
# of Portfolios	129	129	129	128	127	121	109	100						
● Granahan Investment Management	1.82	(11)	13.76	(20)	56.24	(8)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell 2000 Growth	-5.65	(90)	2.82	(89)	33.26	(75)	24.18	(82)	11.70	(84)	15.34	(85)	13.19	(82)



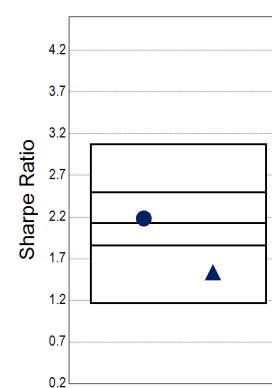
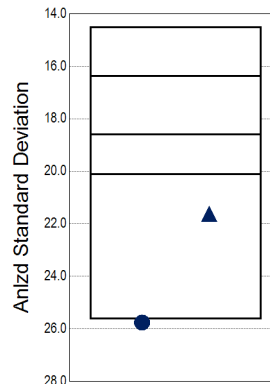
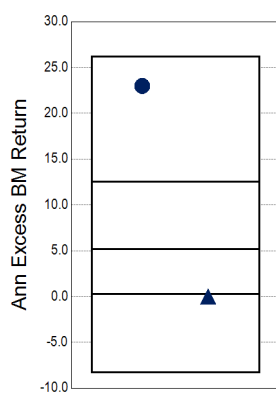
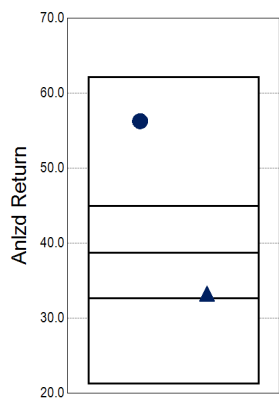
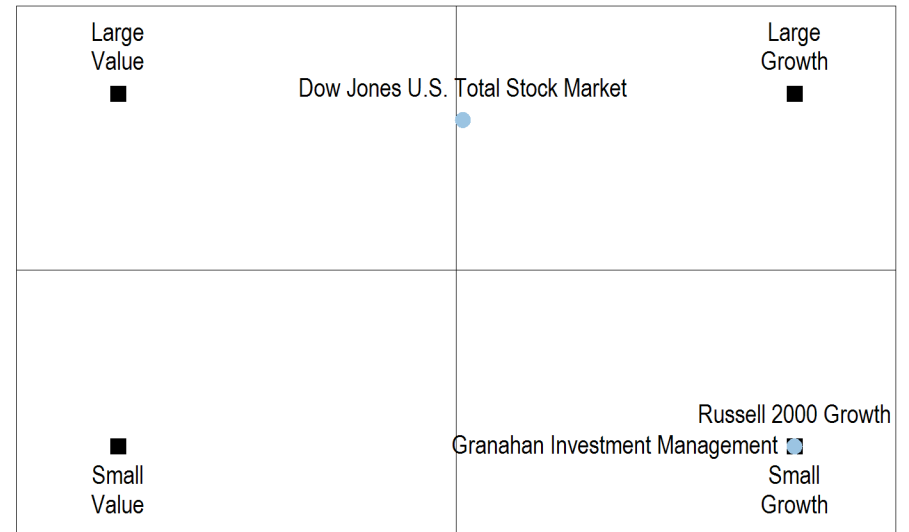
# Los Angeles City Employees' Retirement System

## GRANAHAN INVESTMENT MANAGEMENT

Since Inception Risk Return



U.S. Effective Style Map



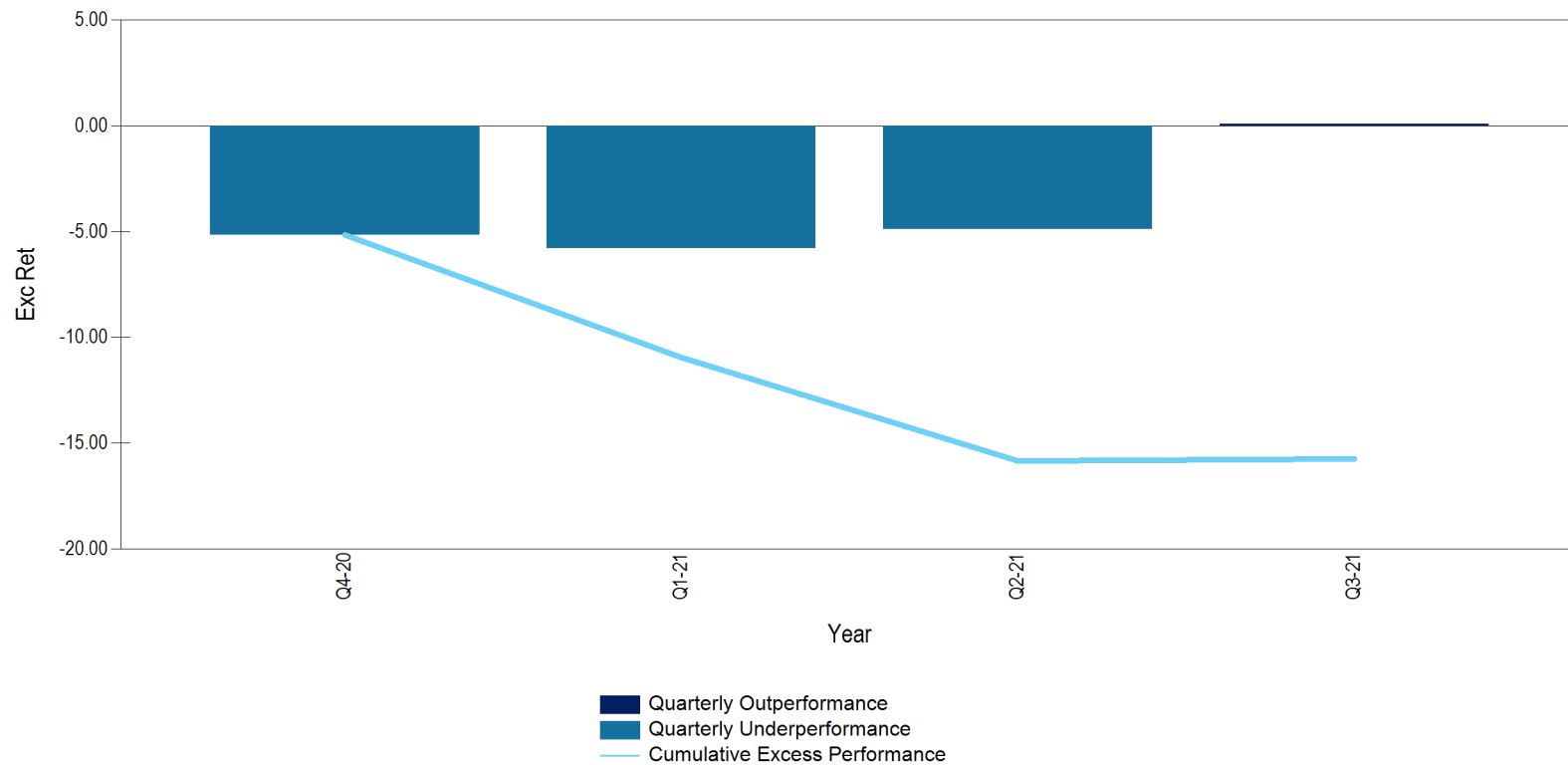
- Granahan Investment Mana...
- ▲ Russell 2000 Growth
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SEGALL, BRYANT & HAMILL

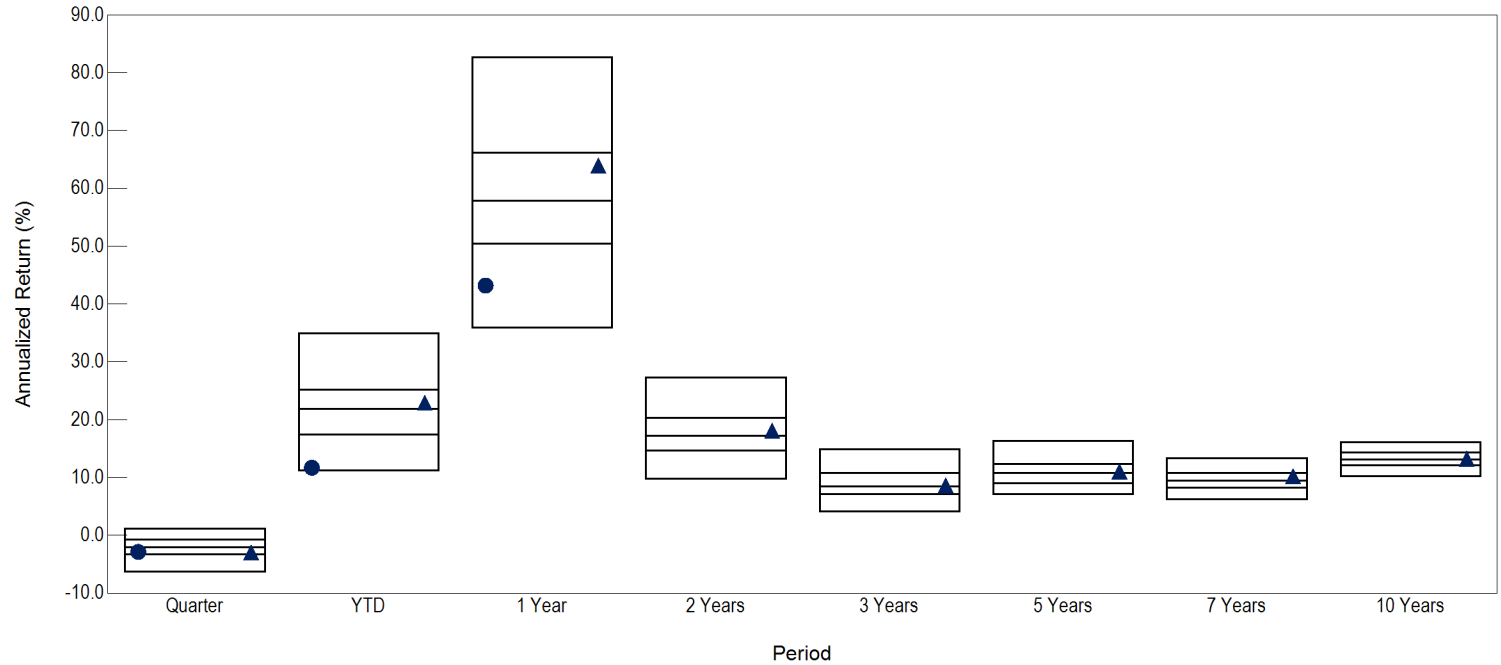
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## SEGALL, BRYANT & HAMILL

Segall, Bryant & Hamill vs. eV US Small Cap Value Equity Net



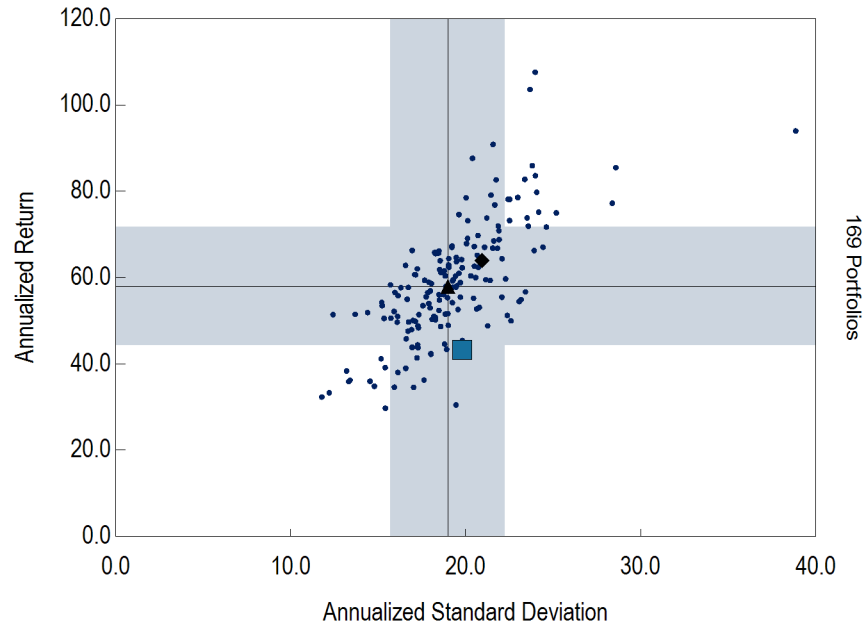
	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	1.13	34.91	82.70	27.33	14.84	16.26	13.29	16.14						
25th Percentile	-0.67	25.28	66.28	20.46	10.85	12.41	10.84	14.38						
Median	-1.95	21.98	57.98	17.34	8.62	10.88	9.51	13.24						
75th Percentile	-3.15	17.56	50.58	14.72	7.26	9.15	8.29	12.16						
95th Percentile	-6.14	11.28	36.04	9.85	4.21	7.22	6.36	10.28						
# of Portfolios	170	170	169	167	164	160	147	135						
● Segall, Bryant & Hamill	-2.89	(71)	11.68	(94)	43.17	(89)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Russell 2000 Value	-2.98	(73)	22.92	(46)	63.92	(33)	18.12	(46)	8.58	(51)	11.03	(46)	10.19	(37)



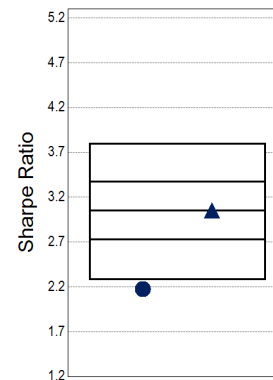
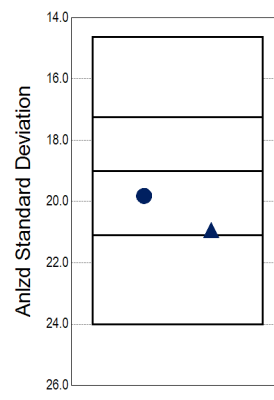
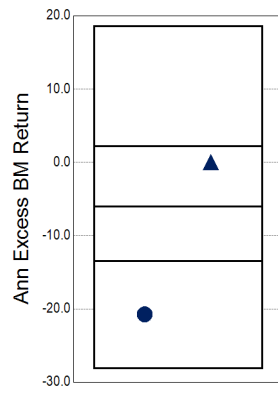
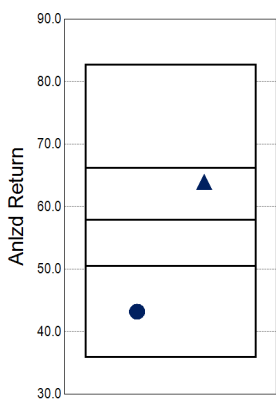
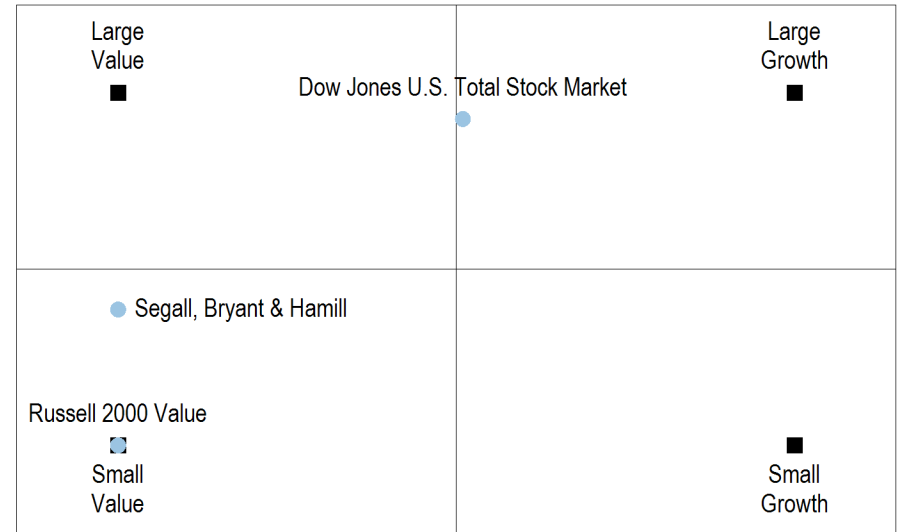
# Los Angeles City Employees' Retirement System

## SEGALL, BRYANT & HAMILL

Since Inception Risk Return



U.S. Effective Style Map



- Segall, Bryant & Hamill
- ▲ Russell 2000 Value
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile





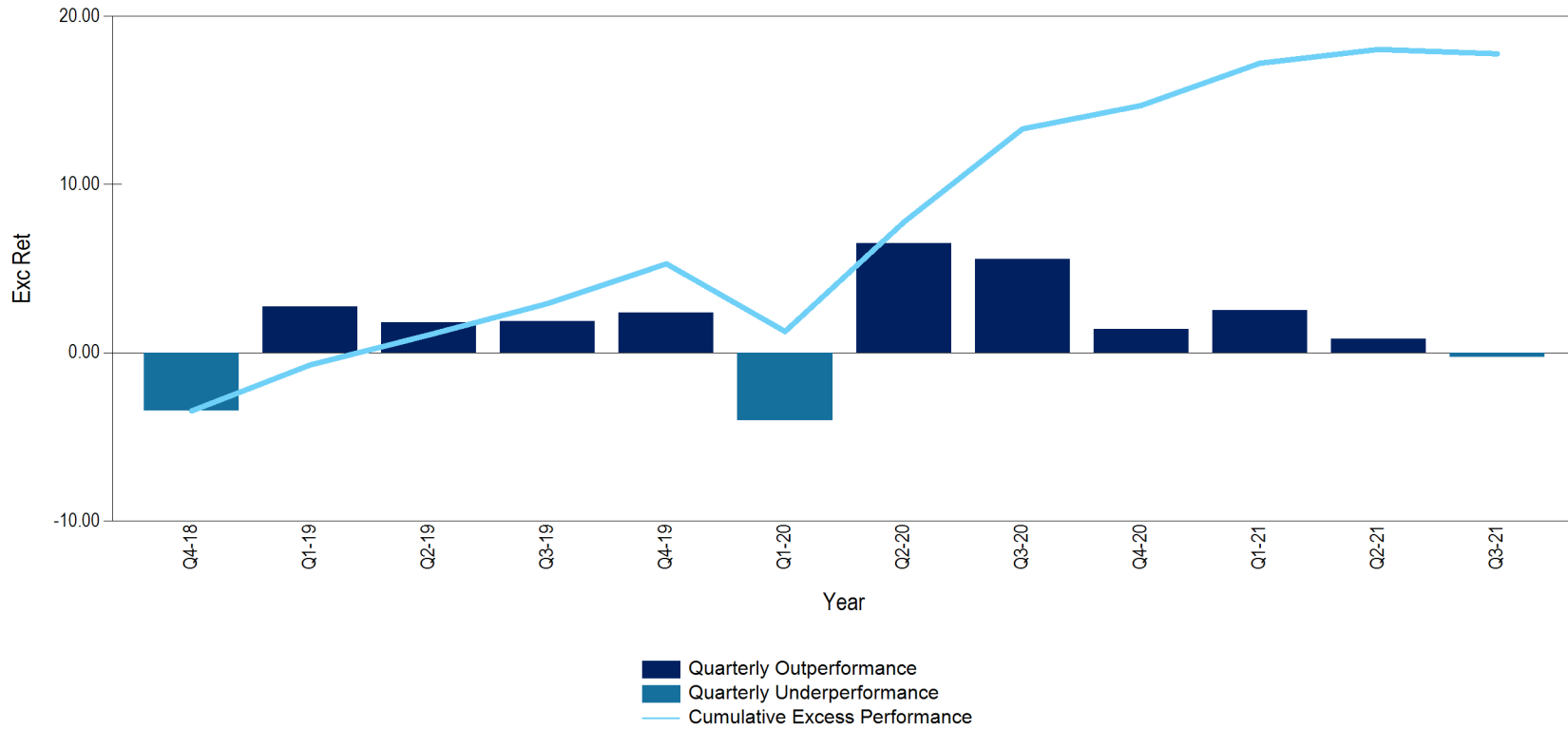
# NON-U.S. EQUITY MANAGER PERFORMANCE



# Los Angeles City Employees' Retirement System

## BARROW HANLEY

Quarterly and Cumulative Excess Performance

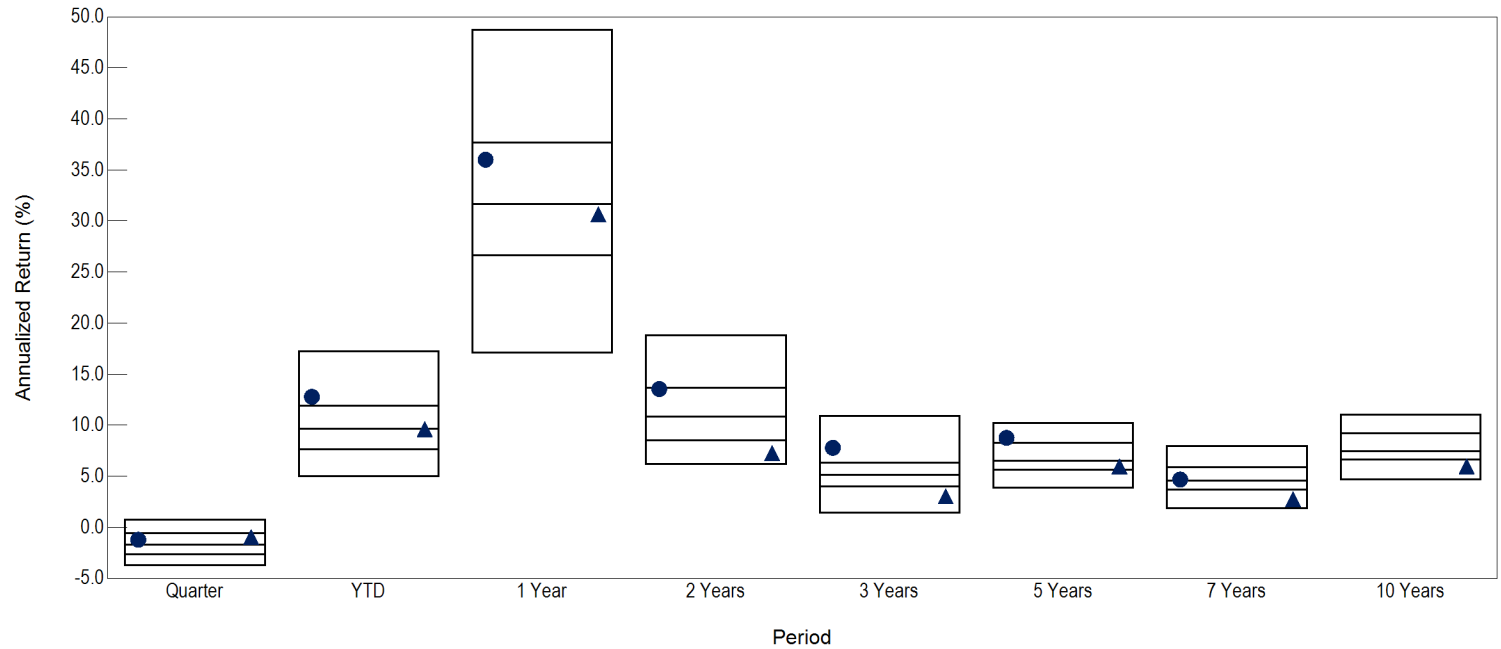




# Los Angeles City Employees' Retirement System

## BARROW HANLEY

Barrow Hanley vs. eV EAFE Value Equity Net



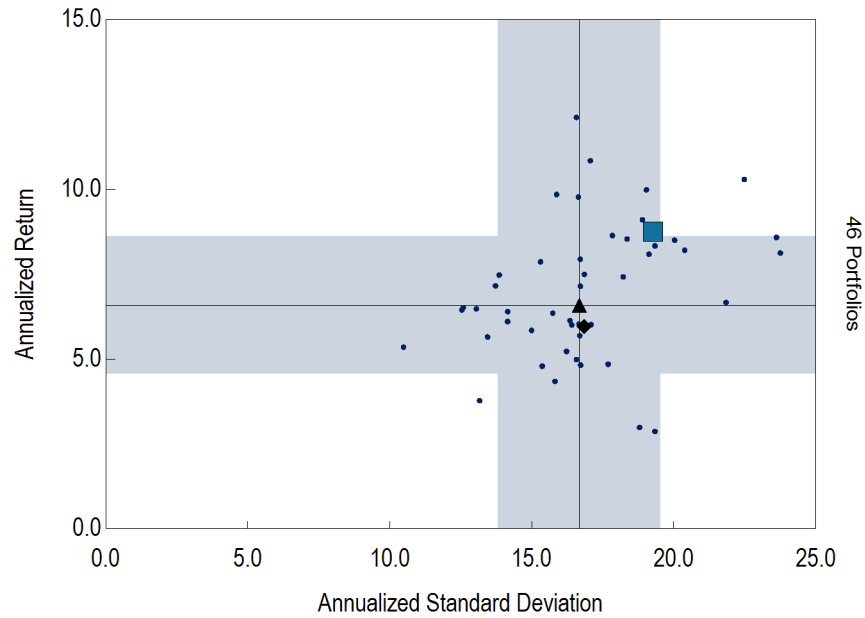
	Return (Rank)															
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years								
5th Percentile	0.77	17.21	48.70	18.83	10.87	10.22	7.93	11.00								
25th Percentile	-0.52	11.97	37.73	13.73	6.38	8.30	5.92	9.25								
Median	-1.64	9.72	31.71	10.92	5.21	6.59	4.63	7.54								
75th Percentile	-2.59	7.71	26.74	8.60	4.08	5.73	3.75	6.70								
95th Percentile	-3.66	5.08	17.17	6.23	1.47	3.92	1.93	4.74								
# of Portfolios	62	62	62	56	54	46	42	37								
● Barrow Hanley	-1.23	(38)	12.77	(18)	36.00	(34)	13.54	(29)	7.78	(14)	8.75	(16)	4.67	(44)	--	(--)
▲ MSCI EAFE Value	-0.97	(36)	9.61	(51)	30.66	(54)	7.27	(87)	3.04	(84)	5.96	(72)	2.74	(86)	5.97	(86)



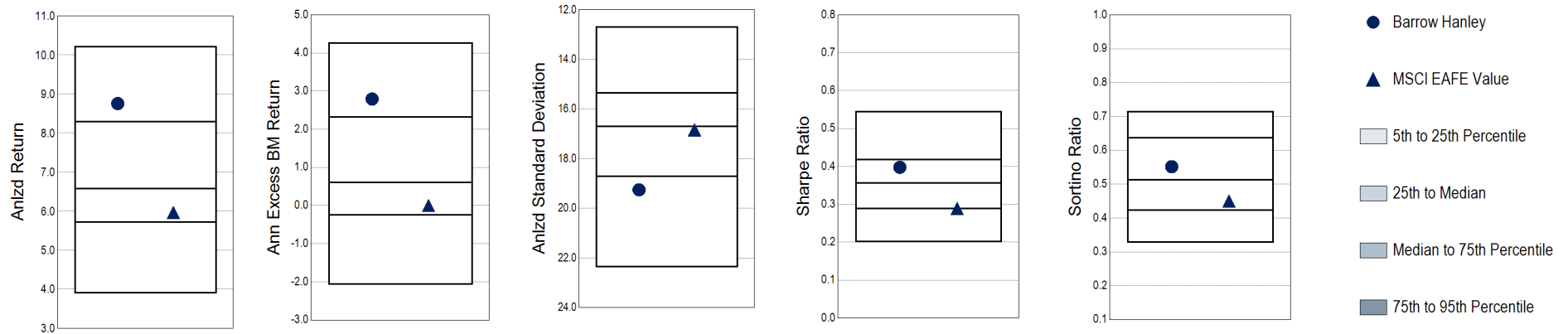
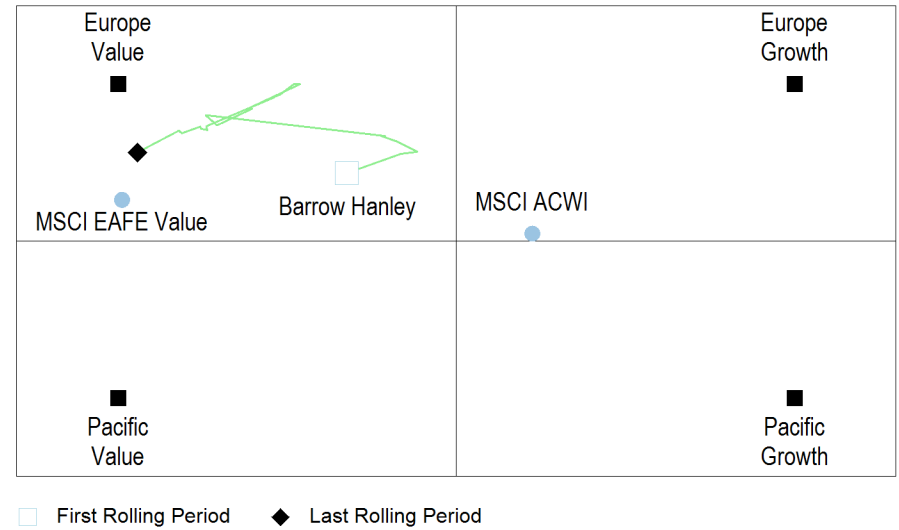
# Los Angeles City Employees' Retirement System

## BARROW HANLEY

5 Year Risk Return



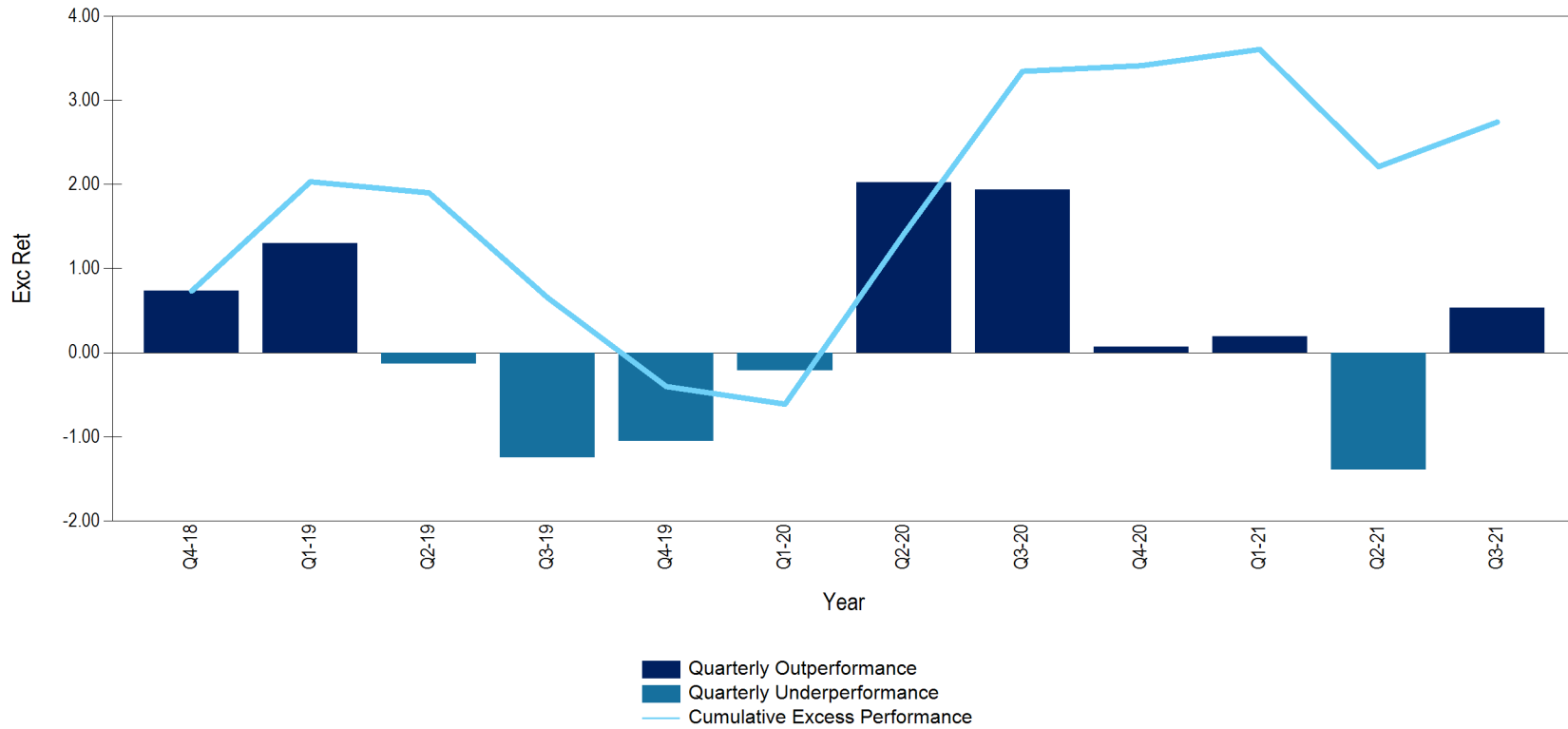
5 Year Style Map



# Los Angeles City Employees' Retirement System

## LAZARD ASSET MANAGEMENT

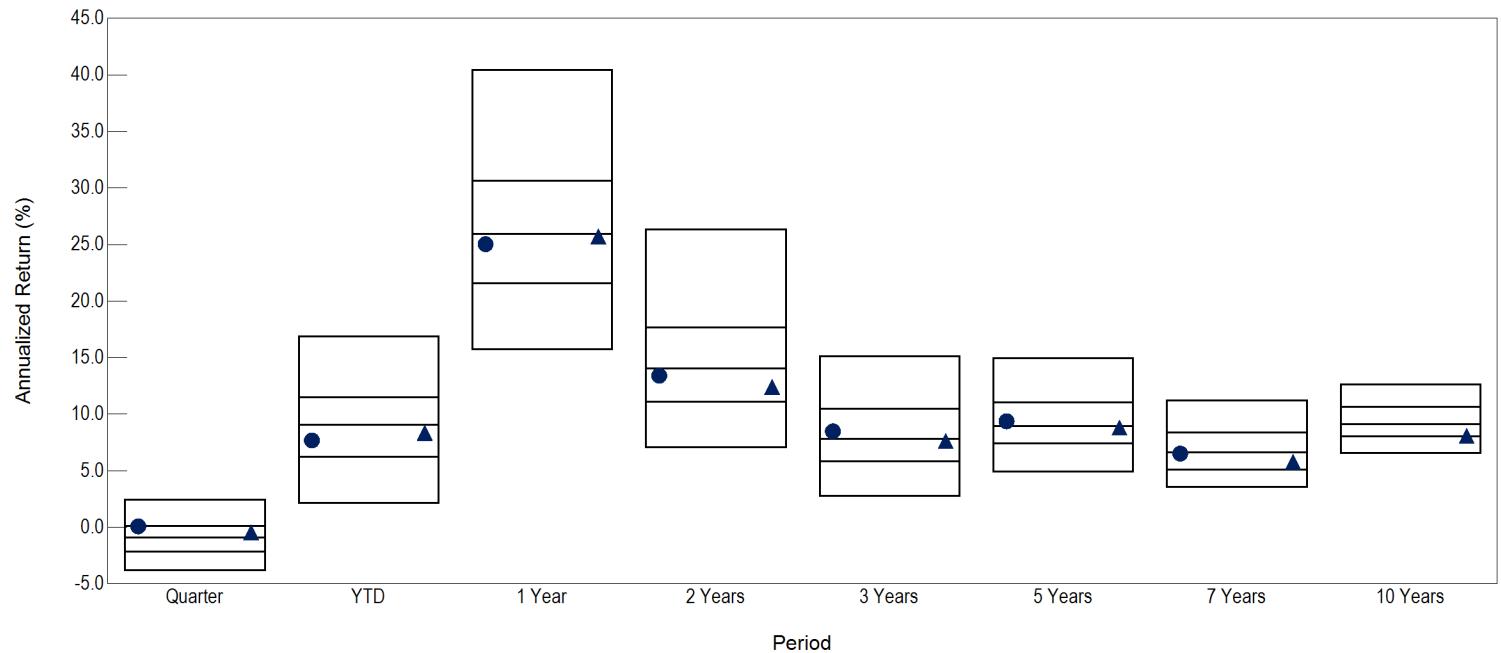
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## LAZARD ASSET MANAGEMENT

Lazard Asset Management vs. eV All EAFE Equity Net



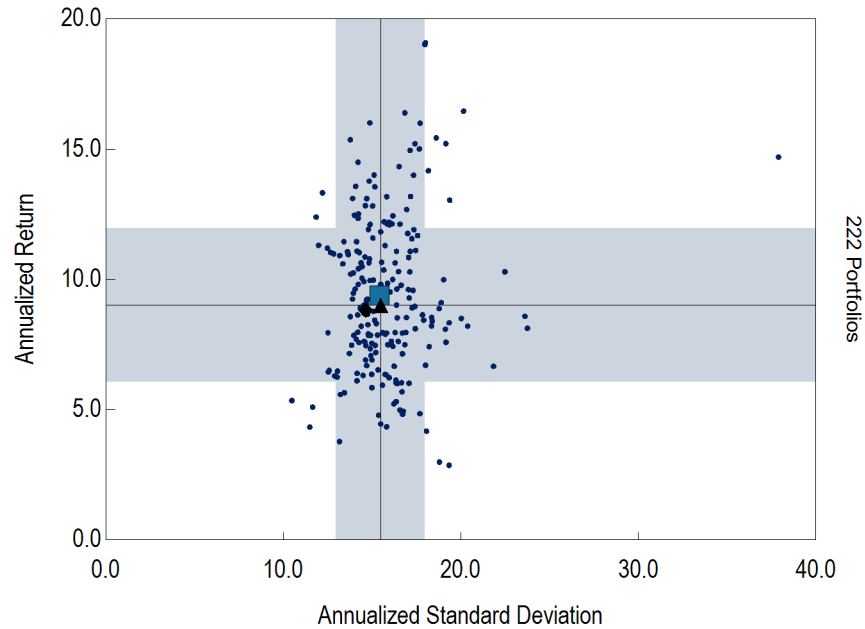
	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)			
5th Percentile	2.42	16.88	40.42	26.34	15.14	14.94	11.21	12.63								
25th Percentile	0.15	11.57	30.72	17.75	10.56	11.11	8.43	10.71								
Median	-0.82	9.12	26.02	14.11	7.86	9.01	6.71	9.17								
75th Percentile	-2.10	6.29	21.65	11.18	5.91	7.49	5.15	8.09								
95th Percentile	-3.72	2.18	15.82	7.16	2.85	4.99	3.61	6.61								
# of Portfolios	251	251	251	244	241	222	189	154								
● Lazard Asset Management	0.08	(28)	7.68	(64)	25.03	(58)	13.40	(60)	8.48	(44)	9.37	(46)	6.51	(53)	--	(--)
▲ MSCI EAFE	-0.45	(40)	8.35	(58)	25.73	(53)	12.41	(68)	7.62	(53)	8.81	(54)	5.80	(67)	8.10	(75)



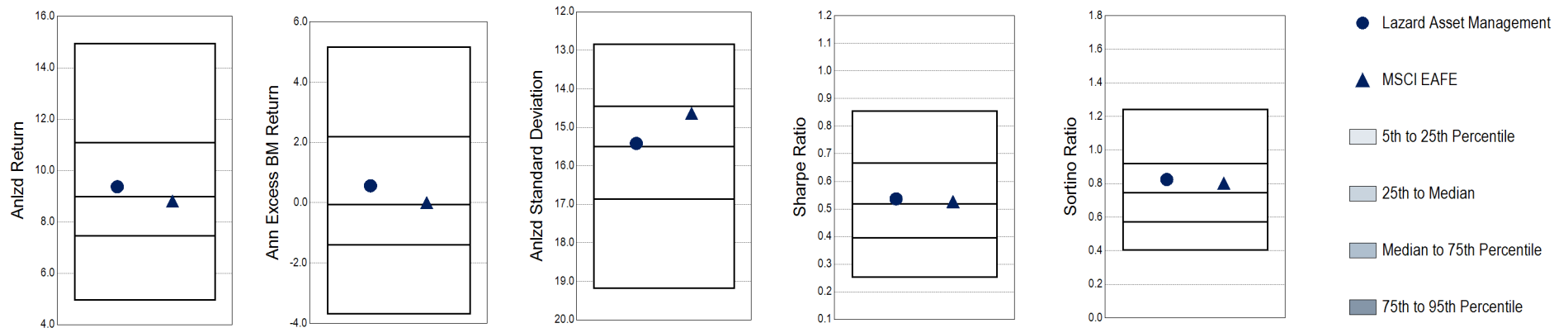
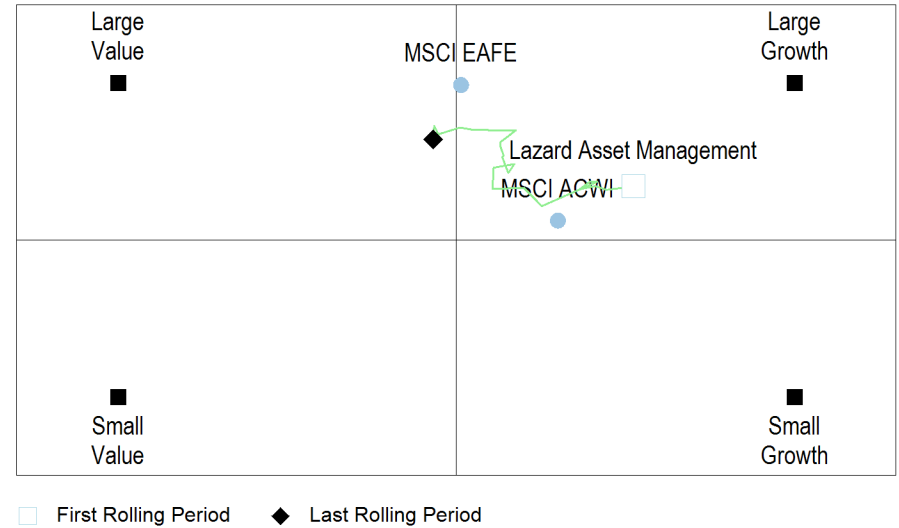
# Los Angeles City Employees' Retirement System

## LAZARD ASSET MANAGEMENT

5 Year Risk Return



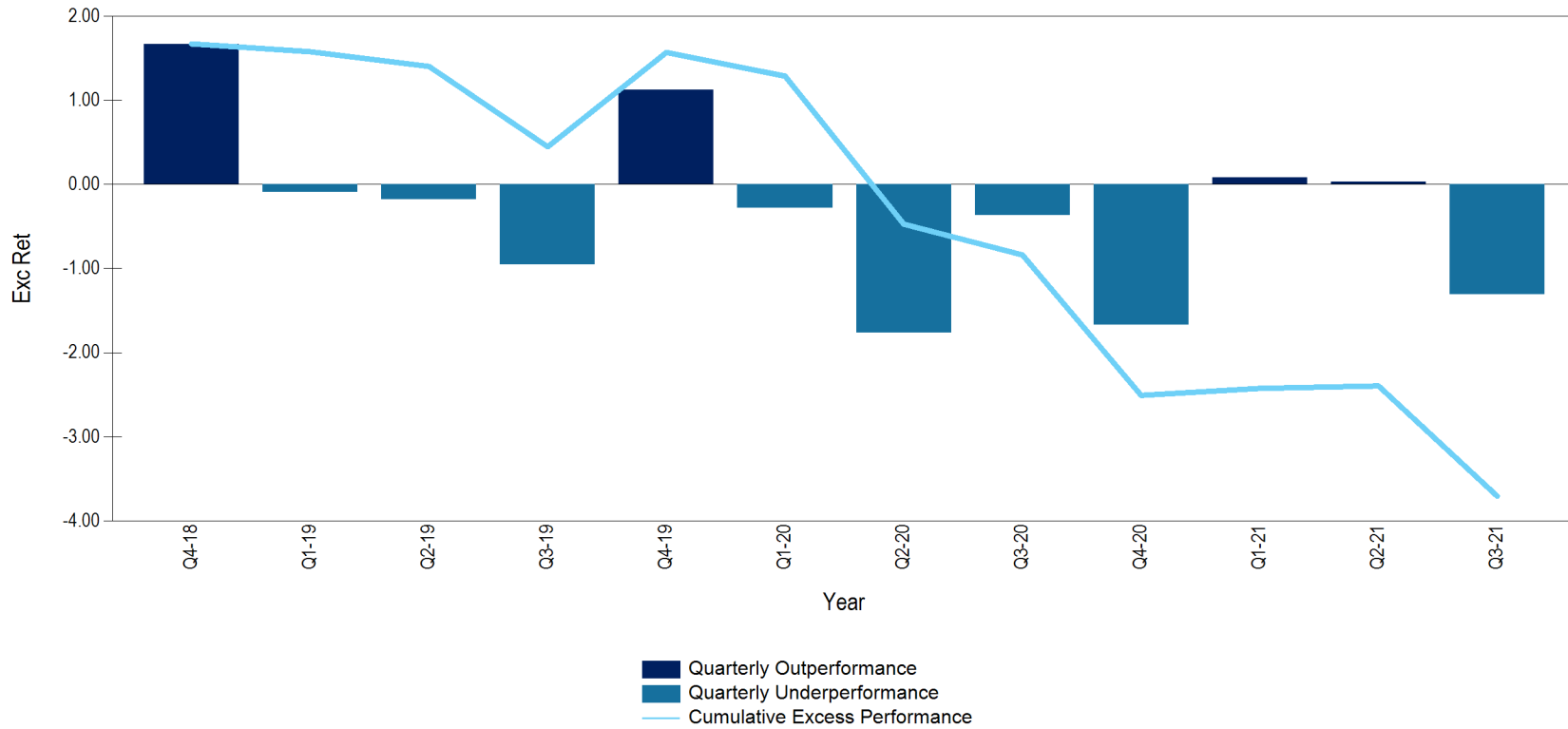
5 Year Style Map



# Los Angeles City Employees' Retirement System

## MFS INSTITUTIONAL ADVISORS

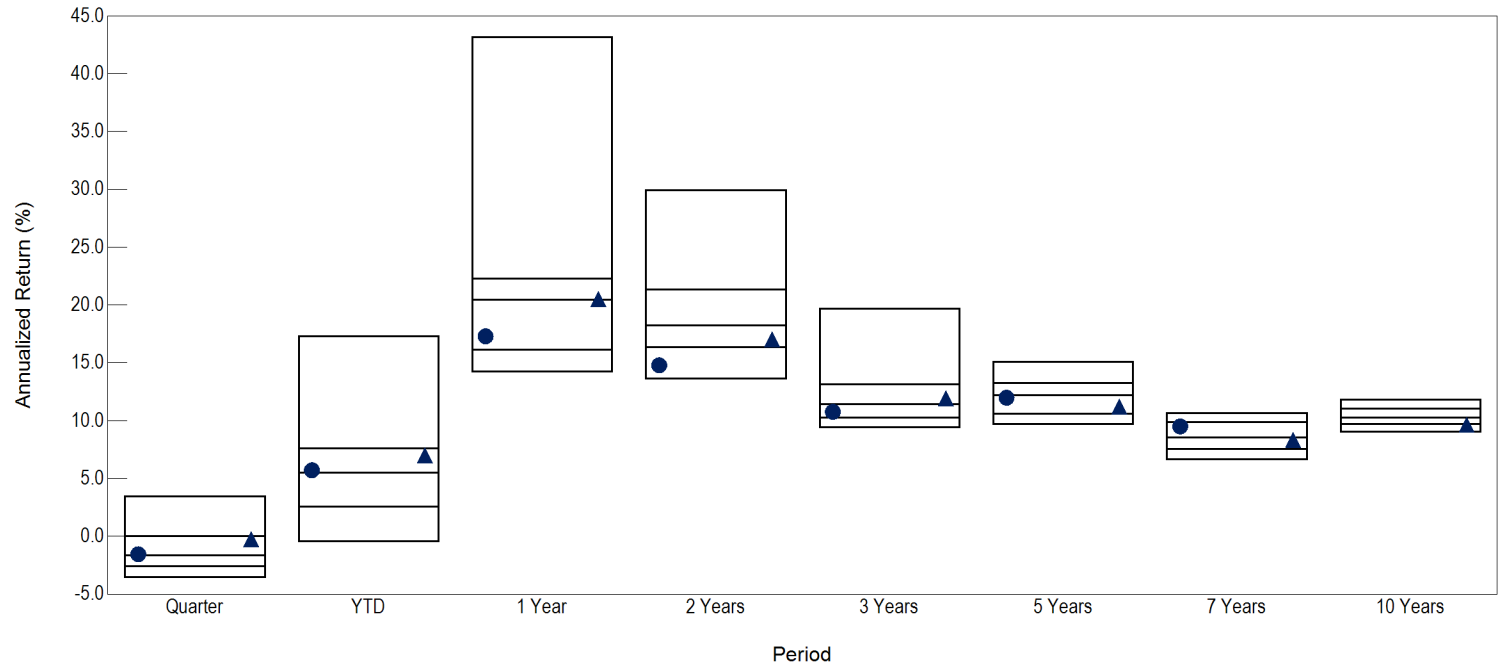
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## MFS INSTITUTIONAL ADVISORS

MFS Institutional Advisors vs. eV EAFE All Cap Growth Net



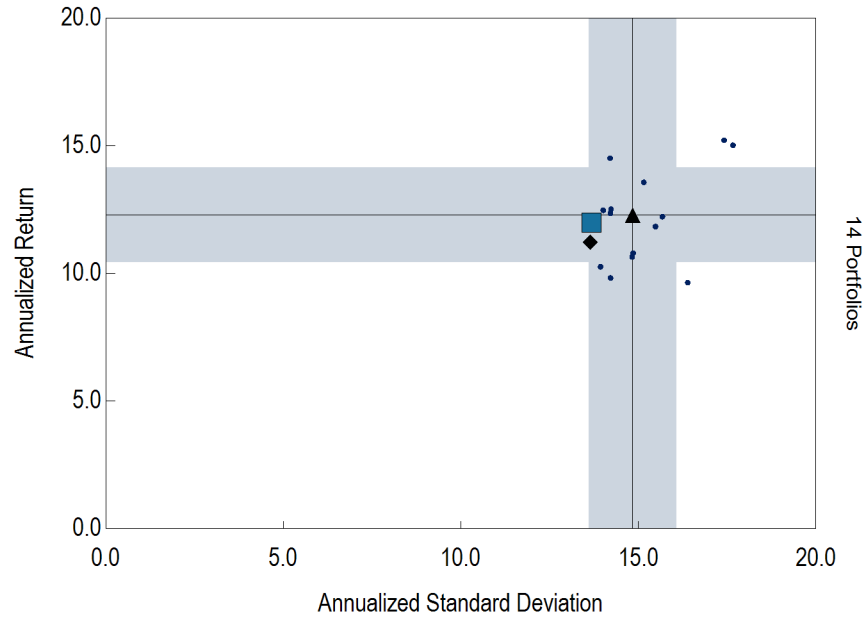
	Return (Rank)															
5th Percentile	3.47	17.27	43.16	29.90	19.68	15.08	10.63	11.82								
25th Percentile	0.06	7.67	22.35	21.37	13.19	13.30	9.95	11.07								
Median	-1.59	5.55	20.53	18.31	11.49	12.28	8.59	10.30								
75th Percentile	-2.52	2.63	16.21	16.38	10.34	10.67	7.59	9.76								
95th Percentile	-3.45	-0.39	14.28	13.68	9.47	9.75	6.72	9.11								
# of Portfolios	15	15	15	15	15	14	13	13								
● MFS Institutional Advisors	-1.56	(50)	5.70	(49)	17.29	(64)	14.78	(93)	10.75	(57)	11.98	(59)	9.50	(42)	--	(--)
▲ MSCI World ex USA Growth NR USD	-0.25	(37)	6.99	(28)	20.50	(51)	17.02	(64)	11.92	(42)	11.21	(67)	8.34	(62)	9.63	(86)



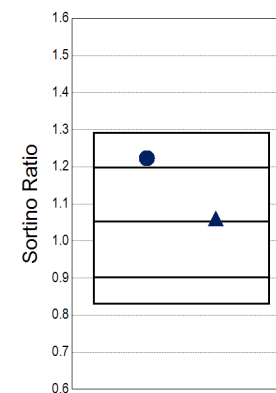
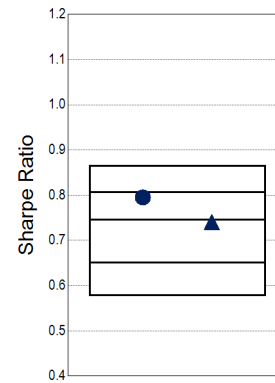
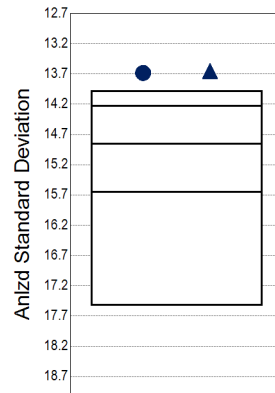
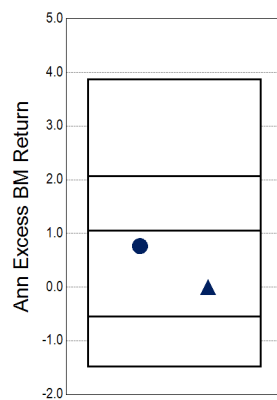
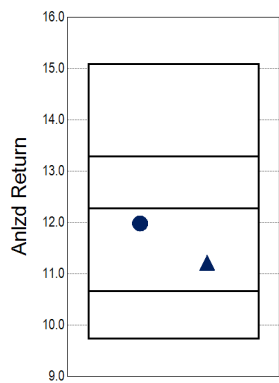
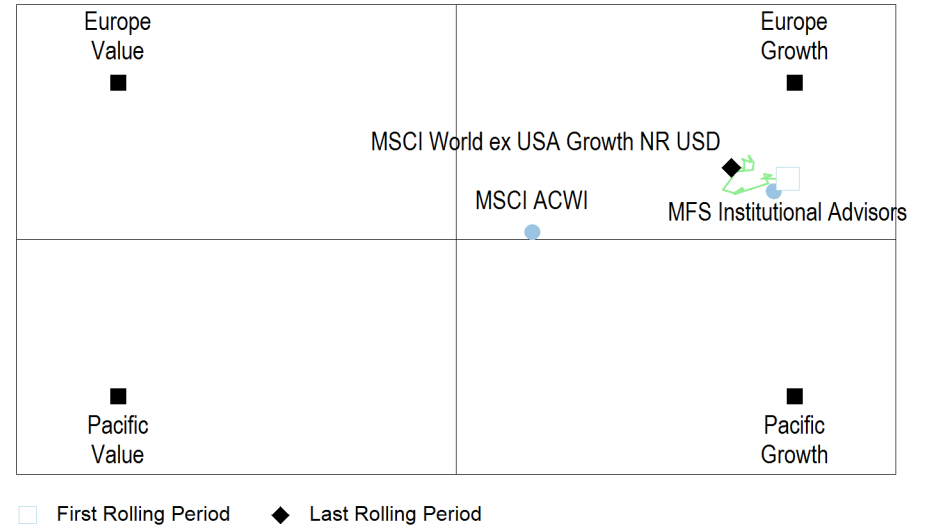
# Los Angeles City Employees' Retirement System

## MFS INSTITUTIONAL ADVISORS

5 Year Risk Return



5 Year Style Map



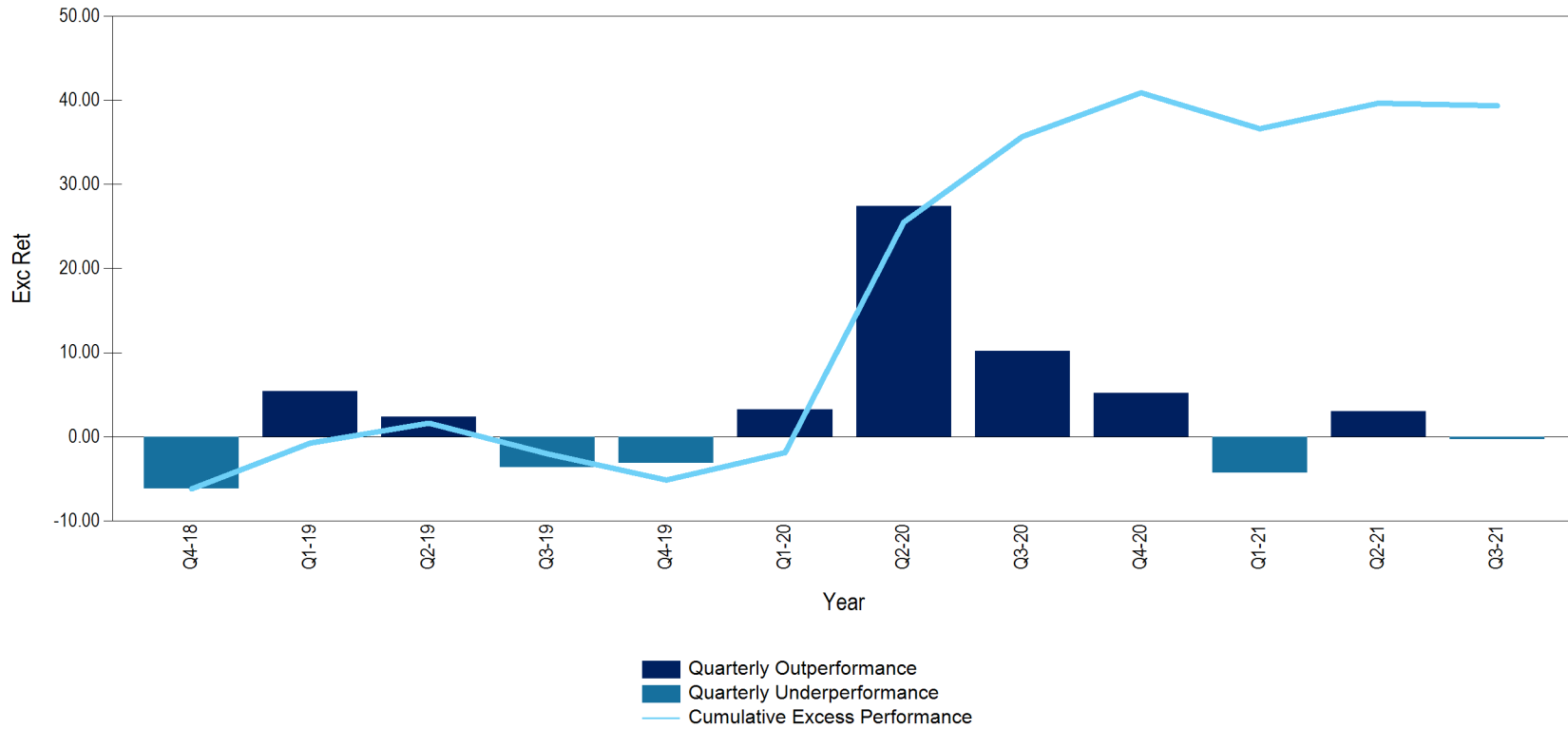
- MFS Institutional Advisors
- ▲ MSCI World ex USA Growth NR USD
- 5th to 25th Percentile
- ▒ 25th to Median
- ▓ Median to 75th Percentile
- 75th to 95th Percentile





# Los Angeles City Employees' Retirement System OBERWEIS ASSET MGMT

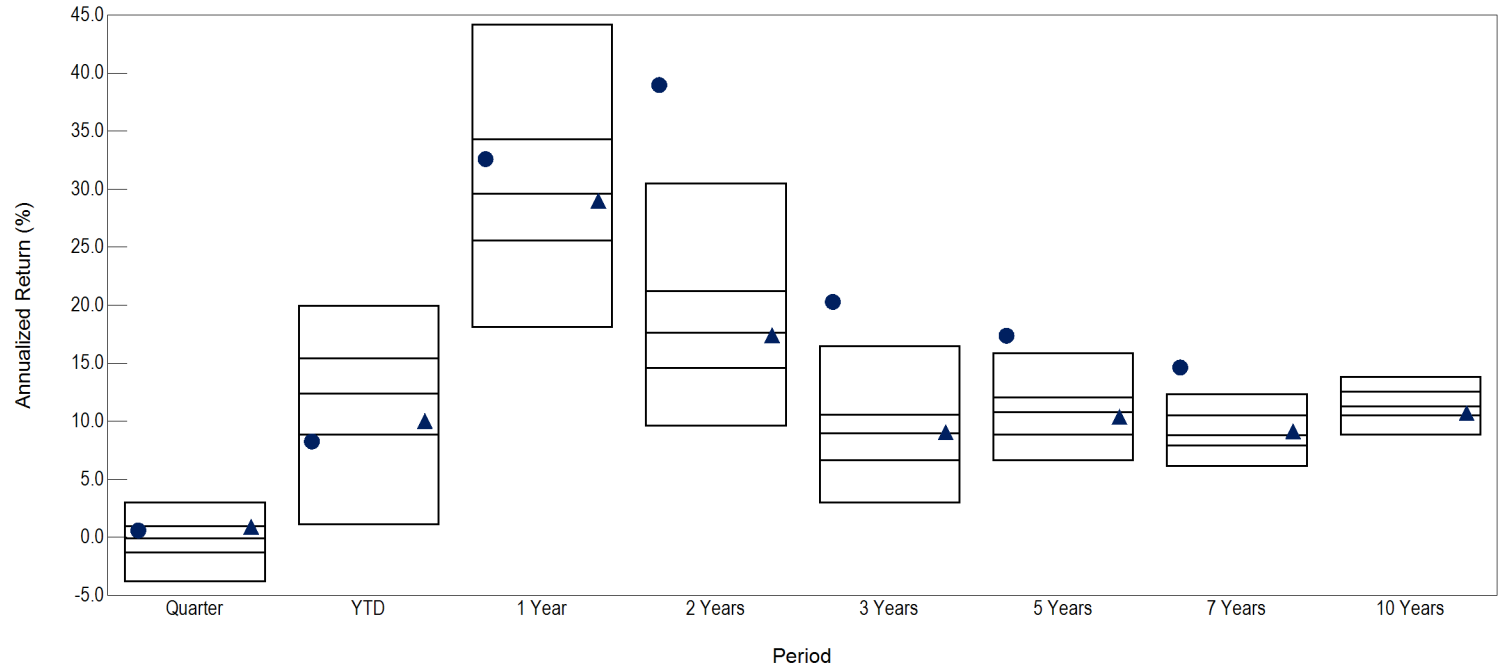
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

Oberweis Asset Mgmt vs. eV EAFE Small Cap Equity Net



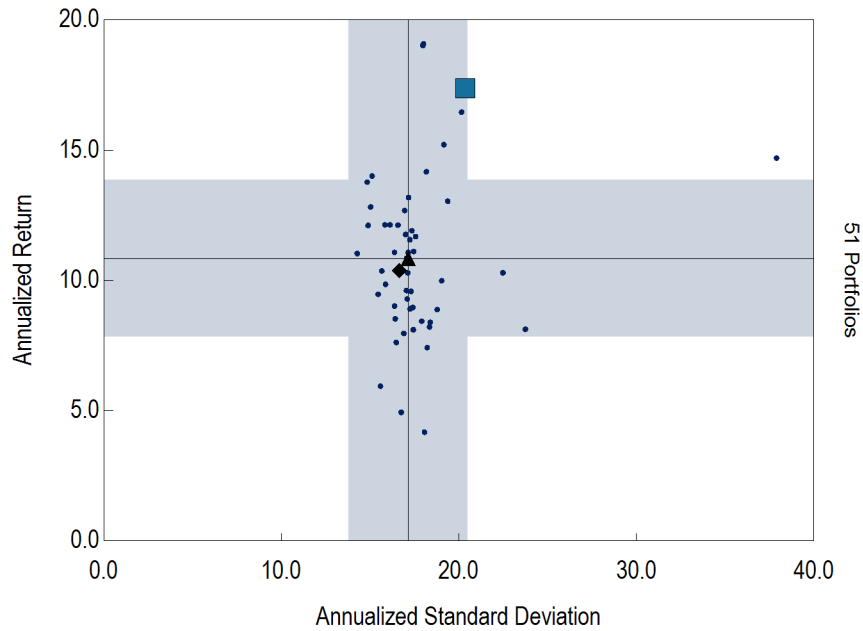
	Return (Rank)															
5th Percentile	2.98	19.96	44.15	30.46	16.49	15.84	12.31	13.81								
25th Percentile	1.02	15.47	34.37	21.26	10.62	12.13	10.59	12.63								
Median	-0.04	12.43	29.64	17.68	9.02	10.84	8.88	11.36								
75th Percentile	-1.27	8.91	25.61	14.63	6.70	8.90	7.94	10.56								
95th Percentile	-3.74	1.20	18.17	9.70	3.06	6.68	6.21	8.91								
# of Portfolios	60	60	60	57	57	51	37	29								
● Oberweis Asset Mgmt	0.59	(37)	8.26	(76)	32.58	(35)	38.97	(2)	20.28	(2)	17.37	(4)	14.63	(1)	--	(--)
▲ MSCI EAFE Small Cap	0.89	(30)	10.02	(72)	29.02	(56)	17.41	(53)	9.05	(49)	10.38	(52)	9.15	(47)	10.73	(68)



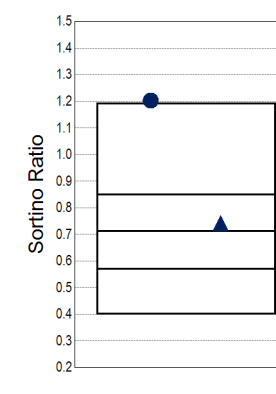
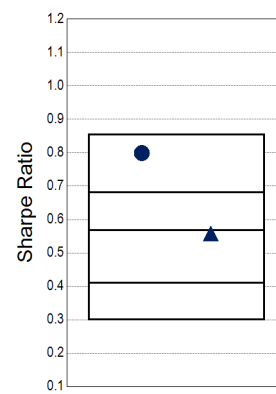
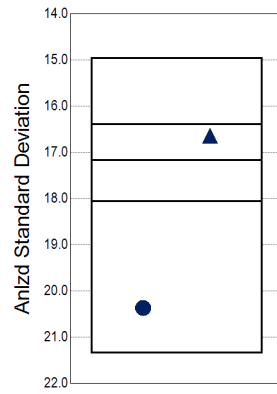
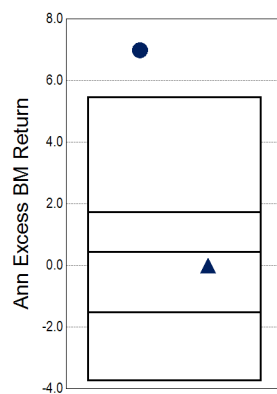
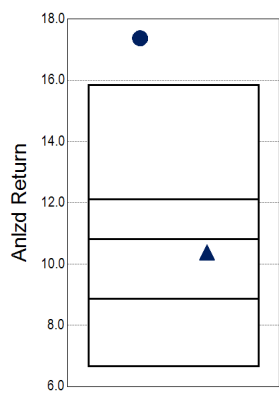
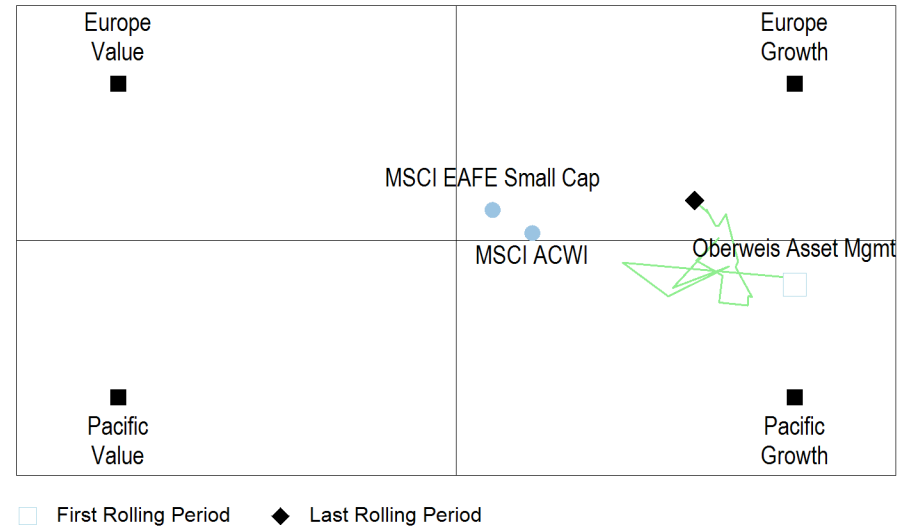
# Los Angeles City Employees' Retirement System

## OBERWEIS ASSET MGMT

5 Year Risk Return



5 Year Style Map



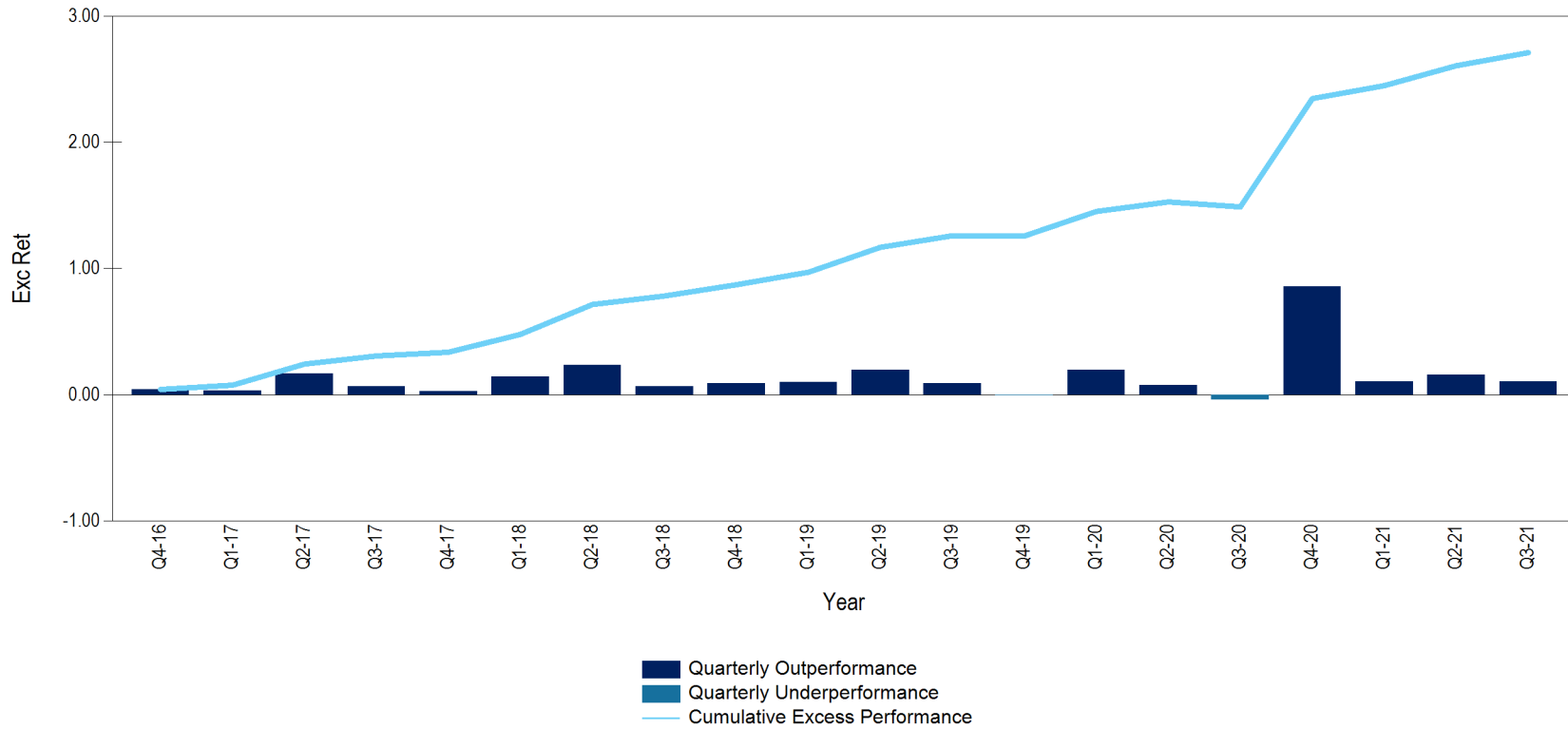
- Oberweis Asset Mgmt
- ▲ MSCI EAFE Small Cap
- 5th to 25th Percentile
- ▒ 25th to Median
- ▓ Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

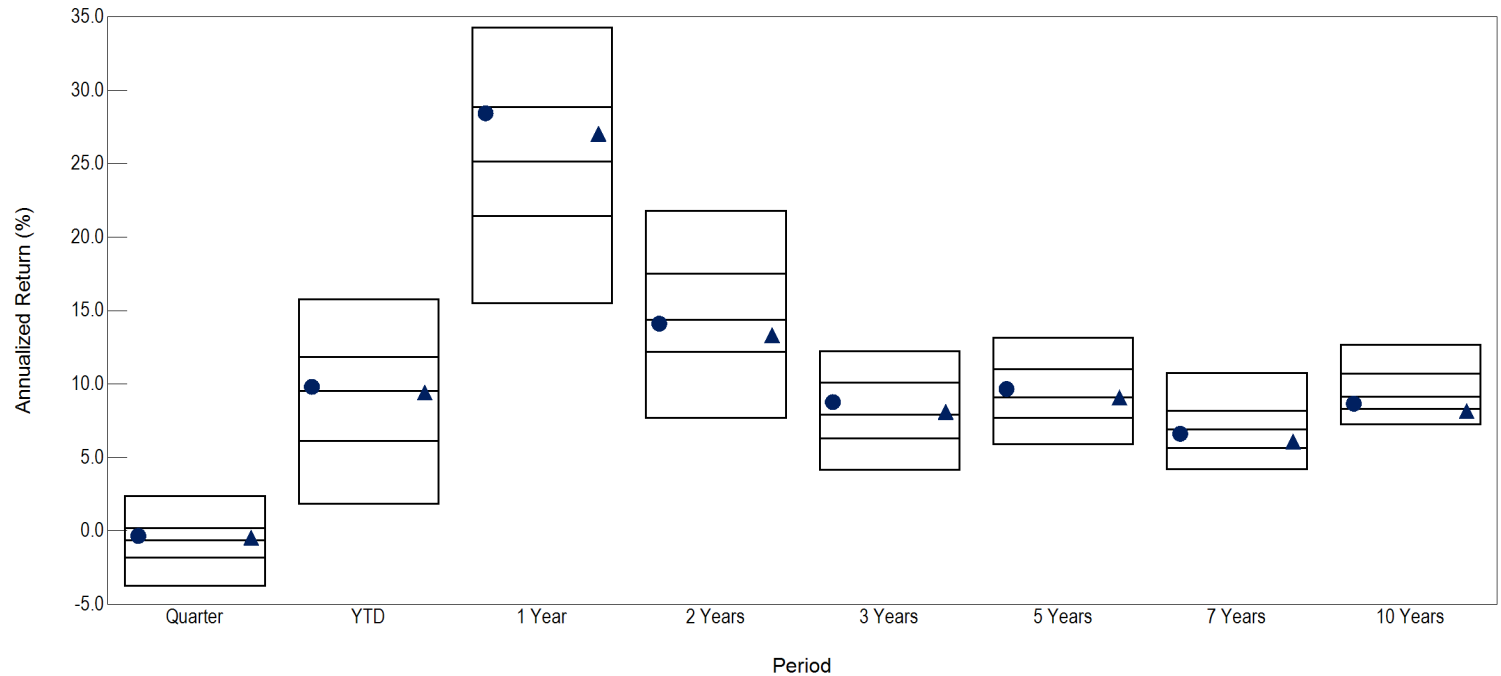
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## SSGA WORLD EX US IMI

SSgA World ex US IMI vs. eV EAFE Core Equity Net



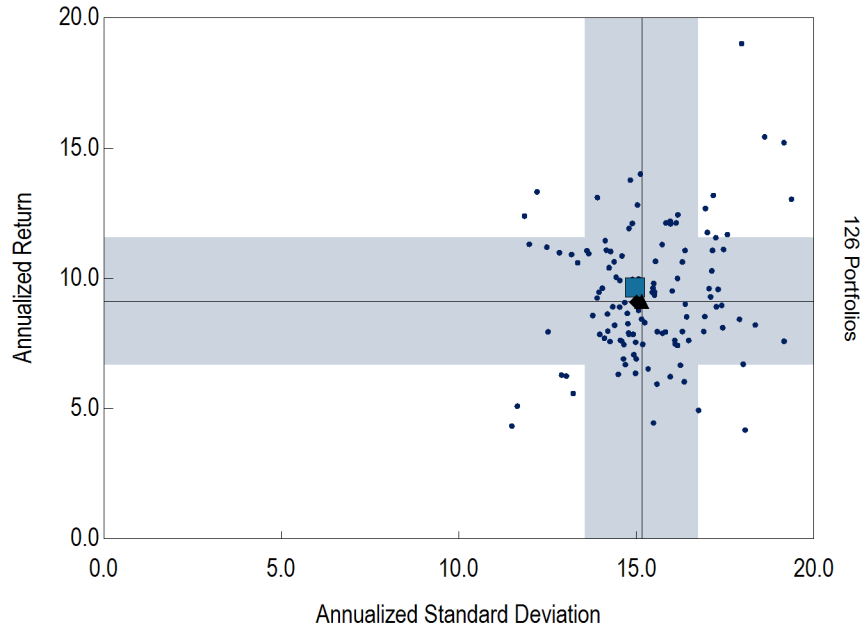
	Return (Rank)															
5th Percentile	2.37	15.78	34.29	21.79	12.22	13.17	10.74	12.68								
25th Percentile	0.25	11.87	28.89	17.55	10.12	11.06	8.23	10.76								
Median	-0.59	9.58	25.21	14.42	7.95	9.12	6.96	9.19								
75th Percentile	-1.76	6.18	21.48	12.24	6.35	7.74	5.70	8.35								
95th Percentile	-3.71	1.90	15.57	7.74	4.19	5.97	4.23	7.29								
# of Portfolios	136	136	136	136	135	126	108	84								
● SSGA World ex US IMI	-0.34	(42)	9.81	(47)	28.43	(30)	14.11	(53)	8.77	(41)	9.66	(40)	6.61	(56)	8.66	(68)
▲ MSCI World ex USA IMI NR USD	-0.45	(47)	9.43	(52)	27.04	(42)	13.33	(65)	8.10	(49)	9.09	(51)	6.09	(65)	8.17	(83)



# Los Angeles City Employees' Retirement System

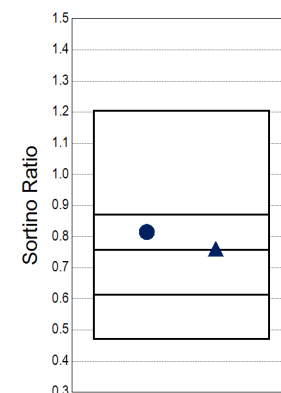
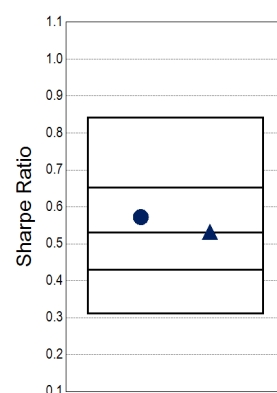
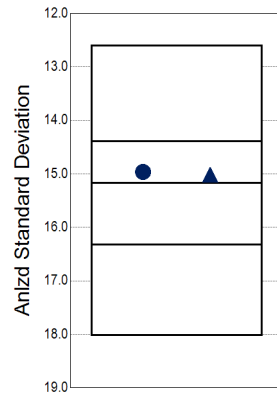
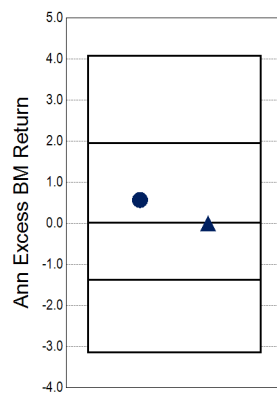
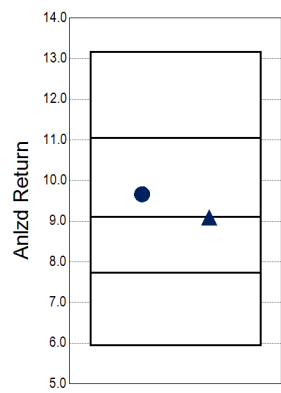
## SSGA WORLD EX US IMI

5 Years Ending September 30, 2021



### Non U.S. Regional Effective Style Map

5 Years Ending September 30, 2021



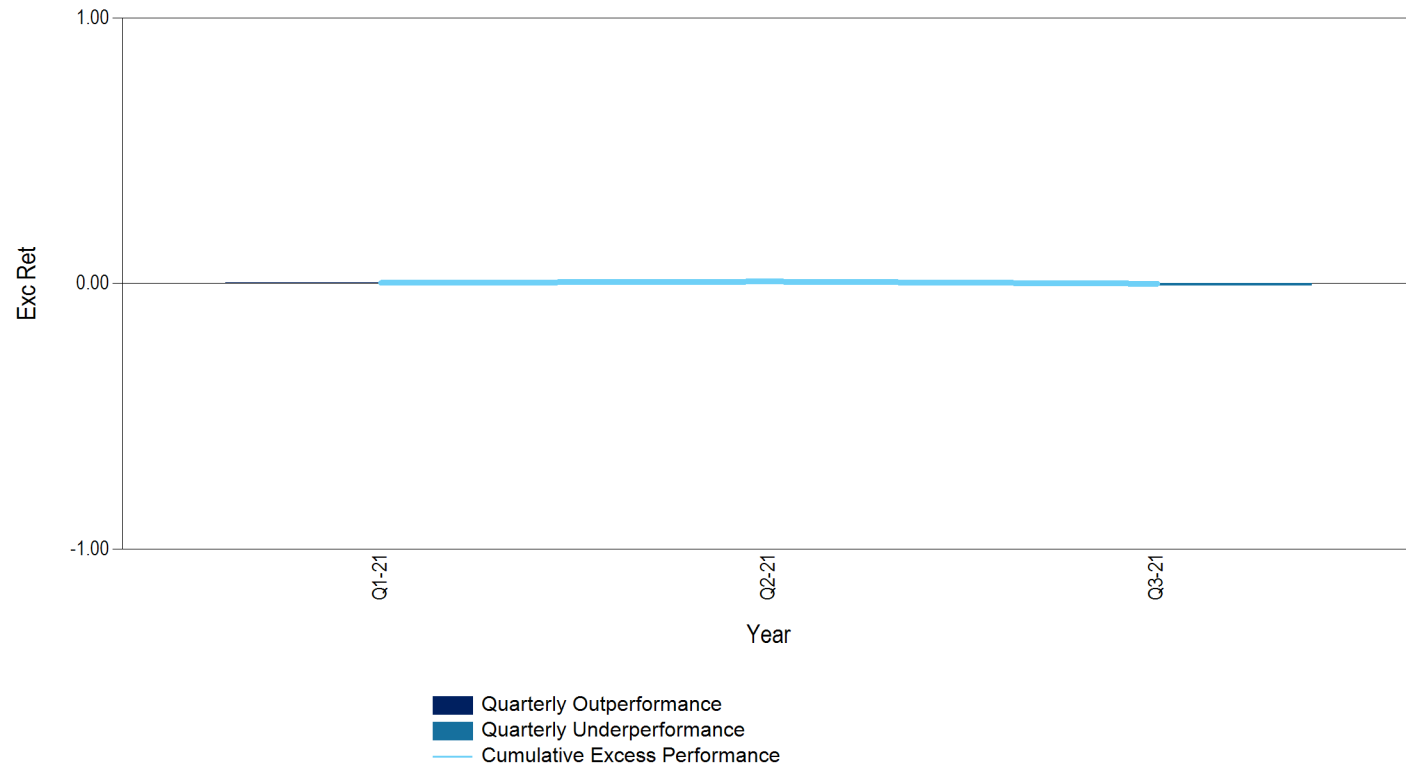
- SSGA World ex US IMI
- ▲ MSCI World ex USA IMI NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SSGA EAFE SC

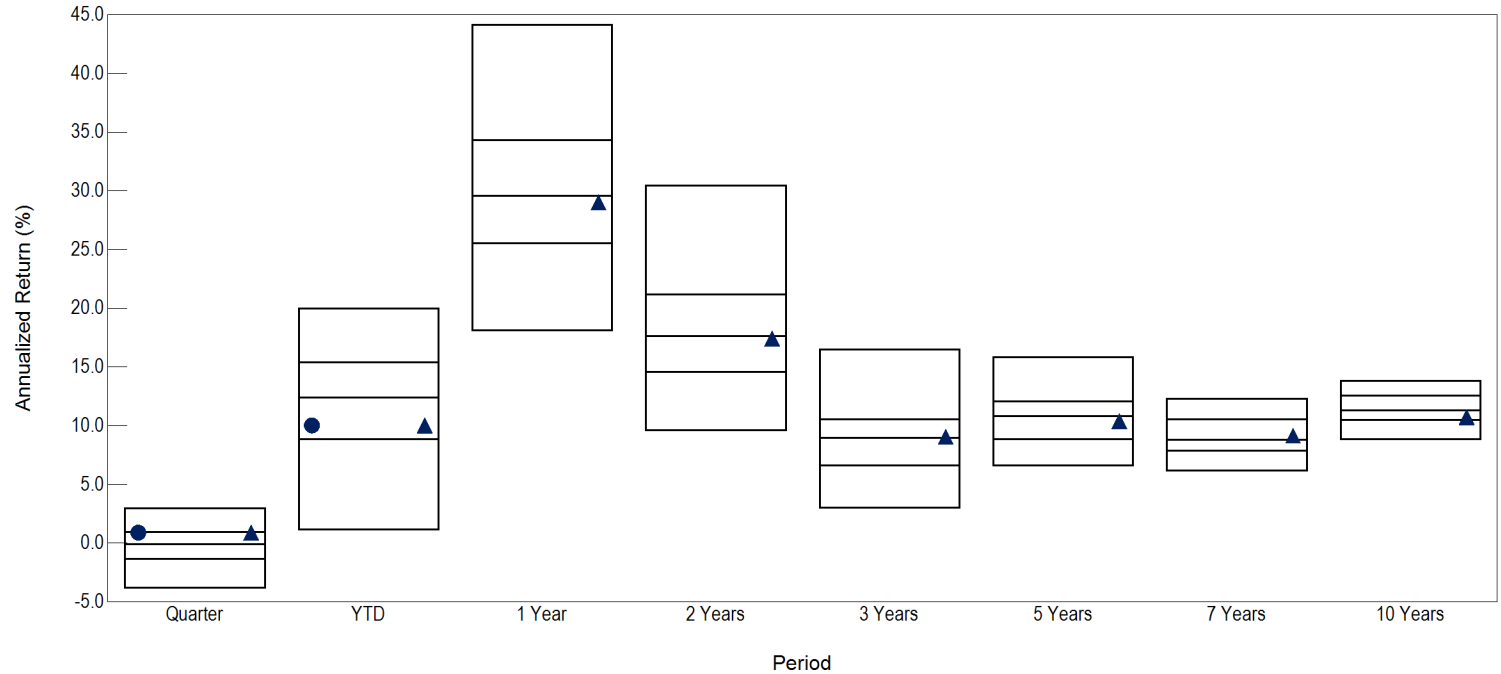
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## SSGA EAFE SC

State Street EAFE SC vs. eV EAFE Small Cap Equity Net



	Return (Rank)															
5th Percentile	2.98	19.96	44.15	30.46	16.49	15.84	12.31	13.81								
25th Percentile	1.02	15.47	34.37	21.26	10.62	12.13	10.59	12.63								
Median	-0.04	12.43	29.64	17.68	9.02	10.84	8.88	11.36								
75th Percentile	-1.27	8.91	25.61	14.63	6.70	8.90	7.94	10.56								
95th Percentile	-3.74	1.20	18.17	9.70	3.06	6.68	6.21	8.91								
# of Portfolios	60	60	60	57	57	51	37	29								
● State Street EAFE SC	0.89	(30)	10.02	(72)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ MSCI EAFE Small Cap	0.89	(30)	10.02	(72)	29.02	(56)	17.41	(53)	9.05	(49)	10.38	(52)	9.15	(47)	10.73	(68)

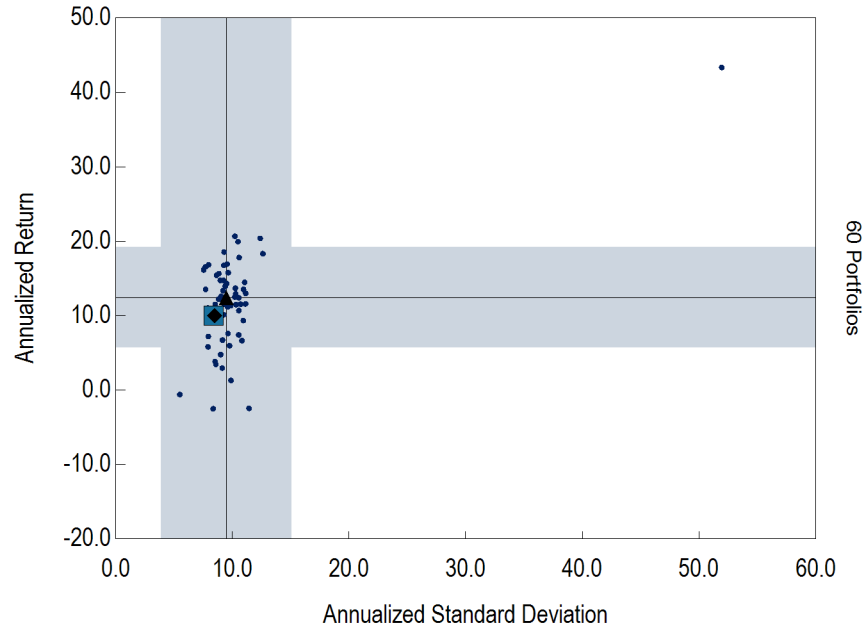




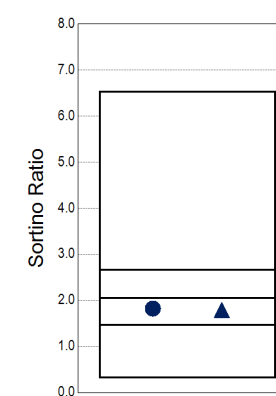
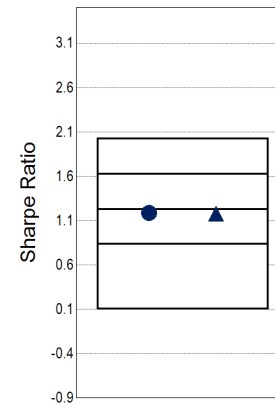
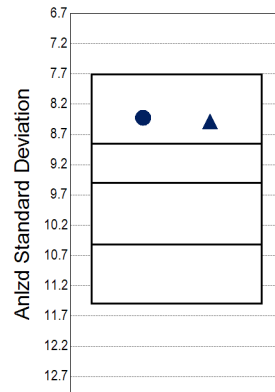
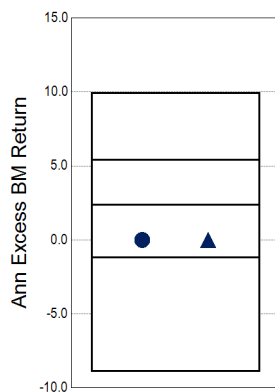
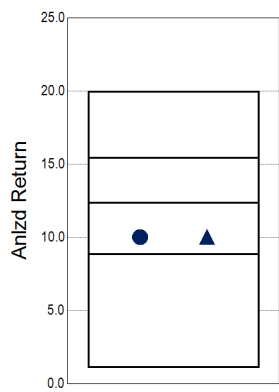
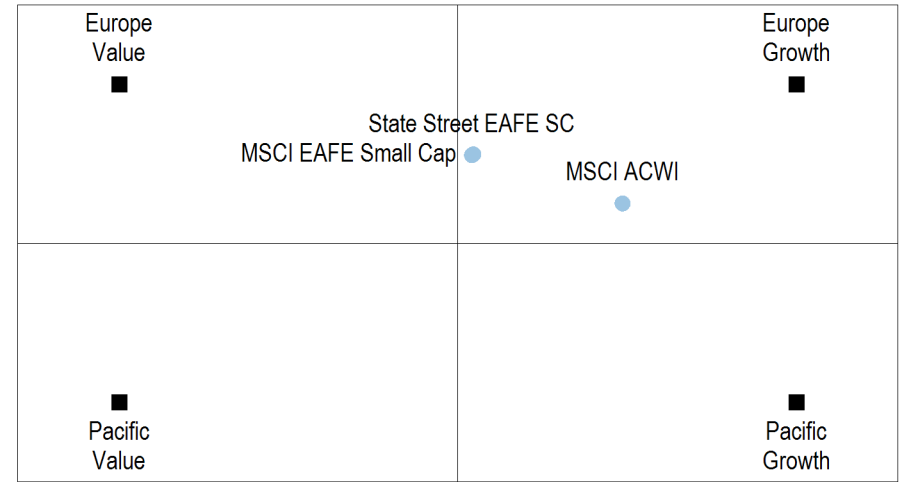
# Los Angeles City Employees' Retirement System

## SSGA EAFE SC

Since Inception Risk Return



Non U.S. Regional Effective Style Map  
Since Inception Ending September 30, 2021



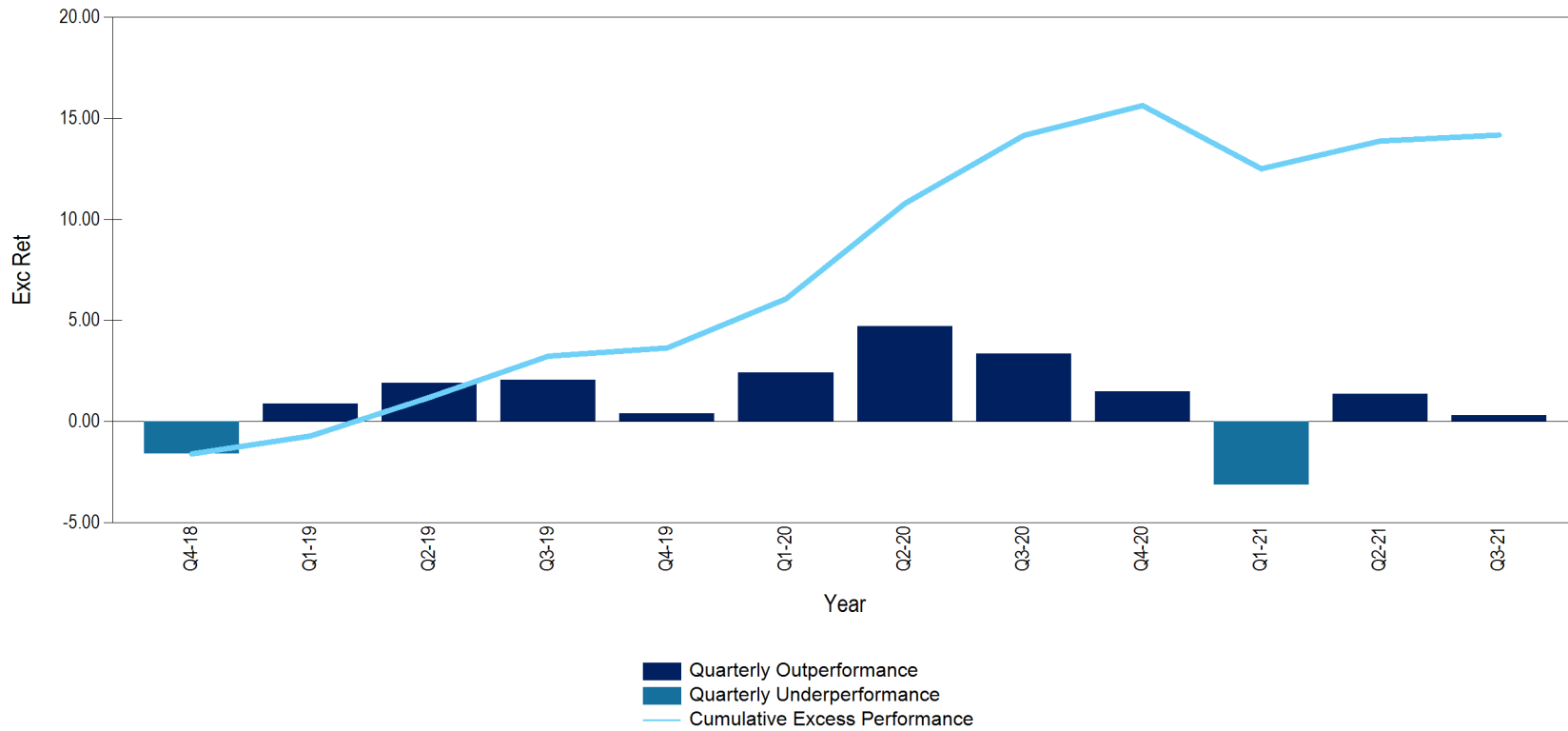
- State Street EAFE SC
- ▲ MSCI EAFE Small Cap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## AXIOM EMERGING MARKETS

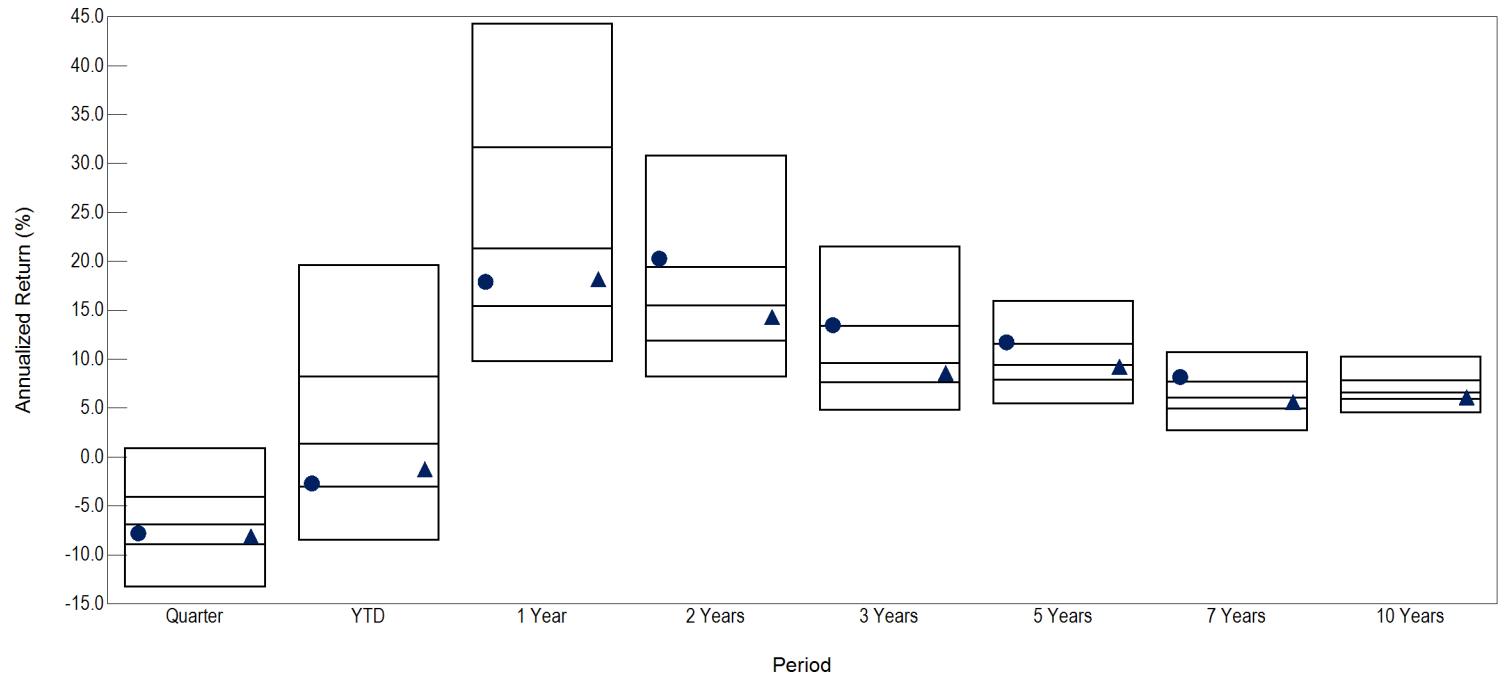
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## AXIOM EMERGING MARKETS

Axiom Emerging Markets vs. eV Emg Mkts Equity Net



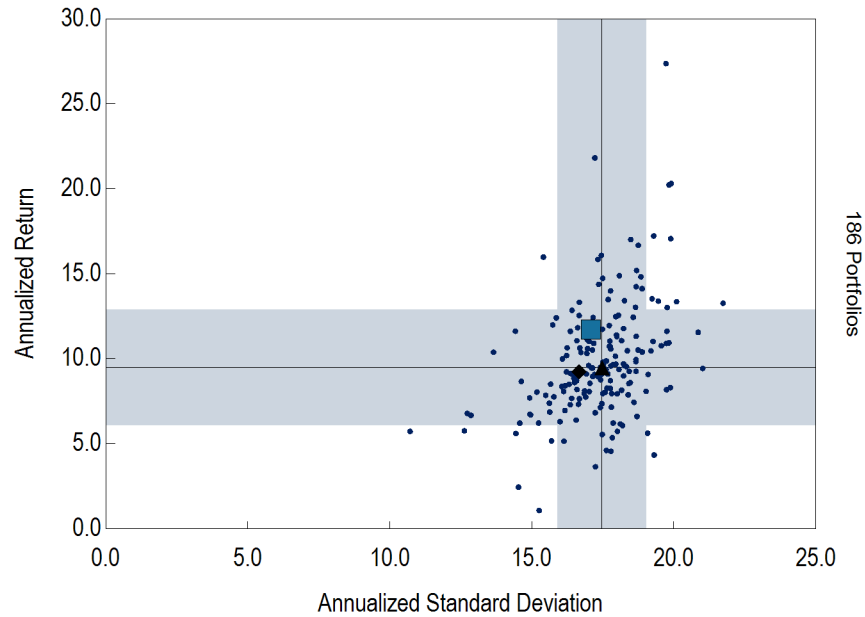
	Return (Rank)															
5th Percentile	0.91	19.63	44.28	30.83	21.51	15.94	10.74	10.25								
25th Percentile	-4.00	8.32	31.73	19.52	13.44	11.61	7.80	7.89								
Median	-6.84	1.41	21.38	15.59	9.68	9.48	6.15	6.66								
75th Percentile	-8.86	-2.99	15.47	11.97	7.68	7.95	5.00	5.99								
95th Percentile	-13.19	-8.36	9.84	8.28	4.92	5.56	2.77	4.62								
# of Portfolios	234	233	231	223	211	186	159	113								
● Axiom Emerging Markets	-7.79	(62)	-2.70	(74)	17.90	(68)	20.27	(24)	13.48	(25)	11.73	(23)	8.18	(24)	--	(--)
▲ MSCI Emerging Markets	-8.09	(65)	-1.25	(66)	18.20	(67)	14.31	(58)	8.58	(63)	9.23	(54)	5.62	(59)	6.09	(70)



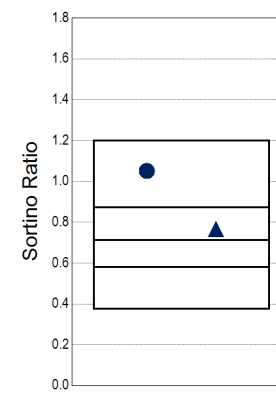
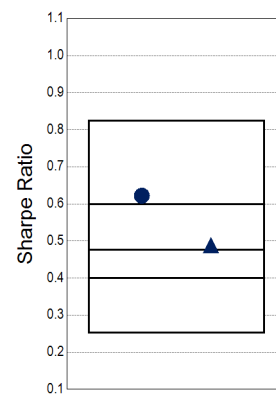
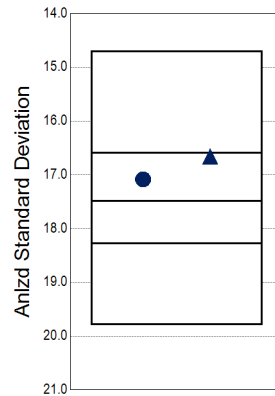
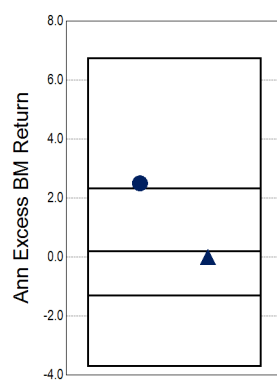
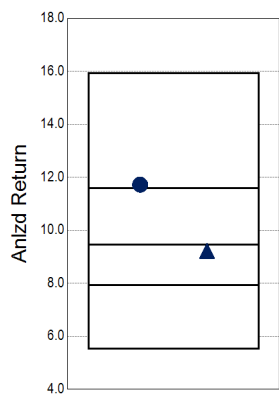
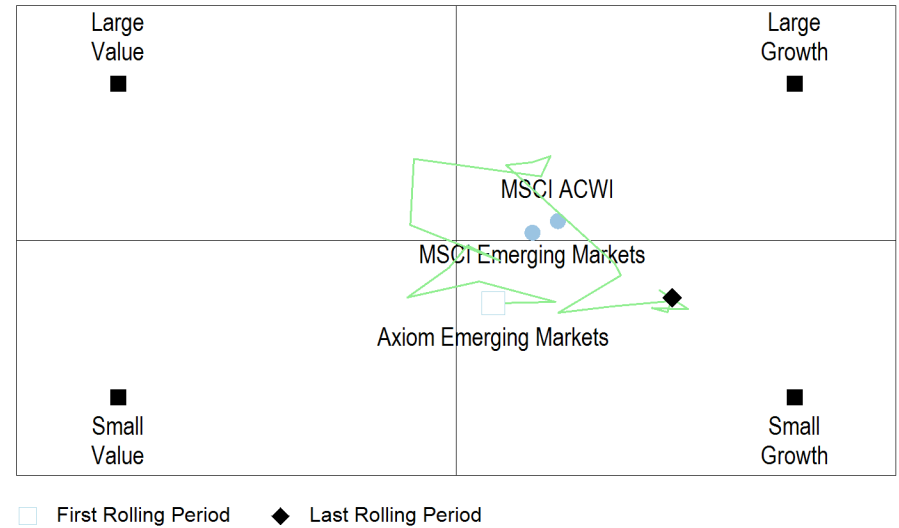
# Los Angeles City Employees' Retirement System

## AXIOM EMERGING MARKETS

5 Year Risk Return



5 Year Style Map



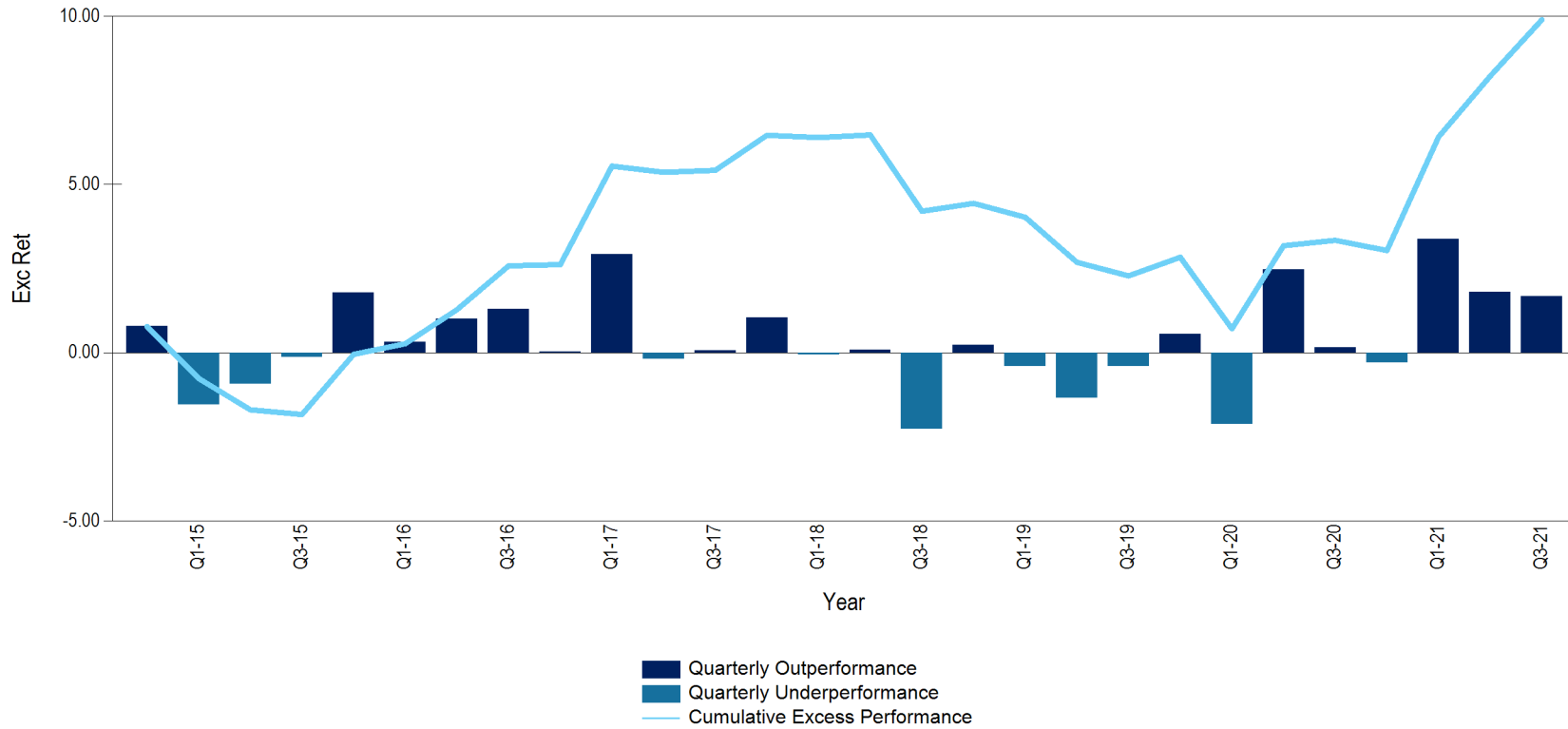
- Axiom Emerging Markets
- ▲ MSCI Emerging Markets
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

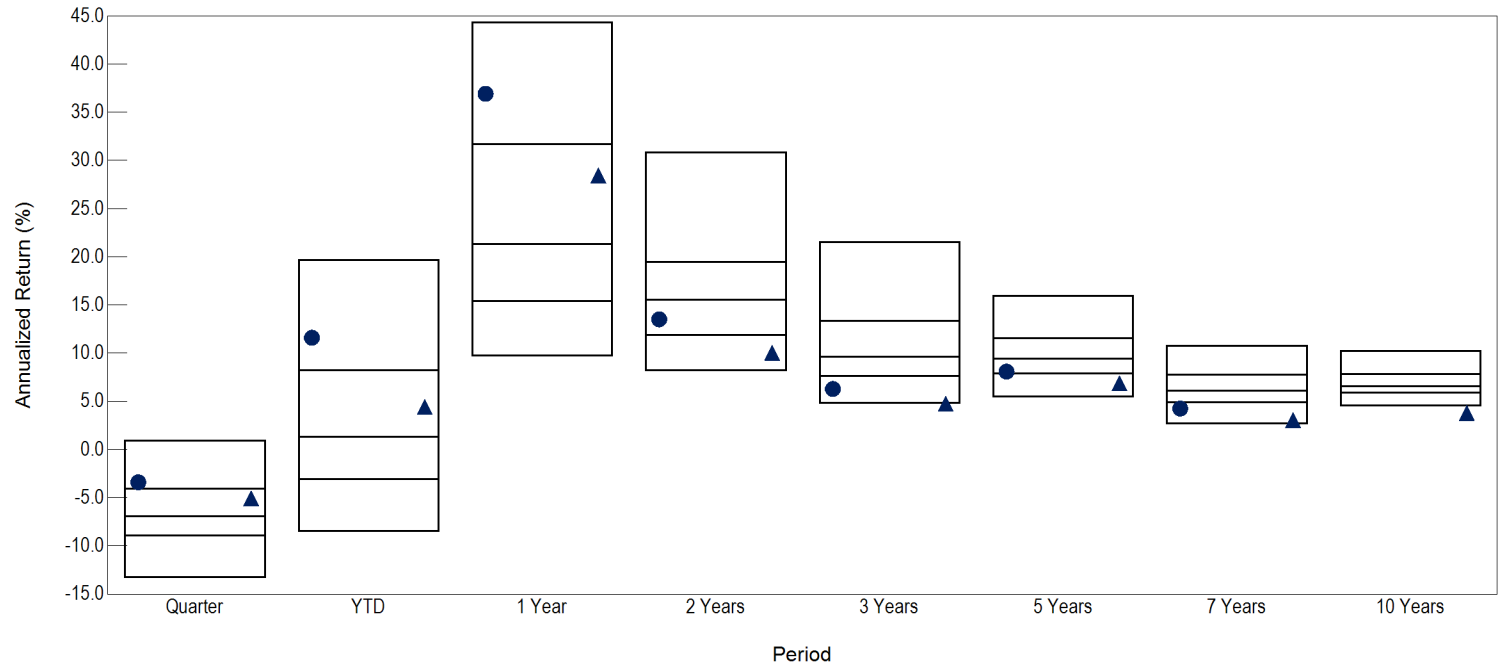
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

DFA Emerging Markets vs. eV Emg Mkts Equity Net



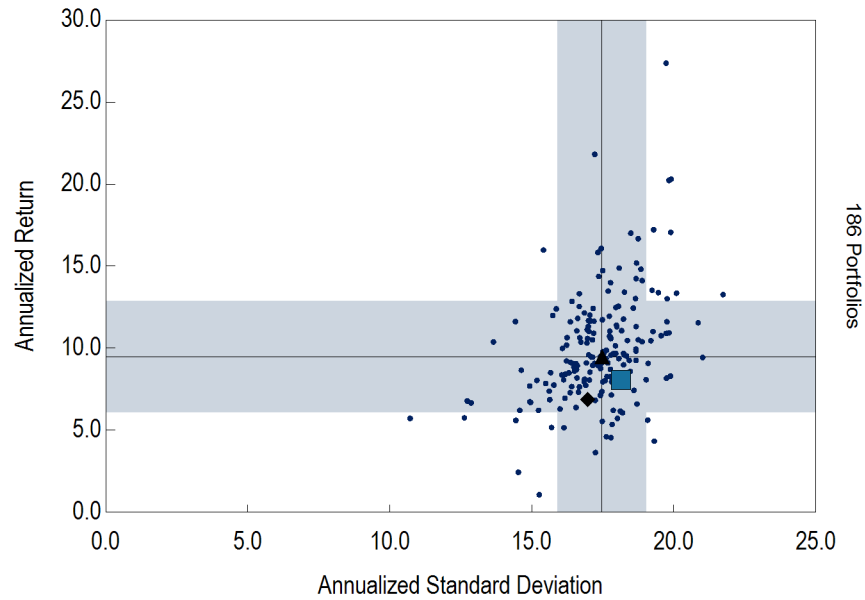
	Return (Rank)															
5th Percentile	0.91	19.63	44.28	30.83	21.51	15.94	10.74	10.25								
25th Percentile	-4.00	8.32	31.73	19.52	13.44	11.61	7.80	7.89								
Median	-6.84	1.41	21.38	15.59	9.68	9.48	6.15	6.66								
75th Percentile	-8.86	-2.99	15.47	11.97	7.68	7.95	5.00	5.99								
95th Percentile	-13.19	-8.36	9.84	8.28	4.92	5.56	2.77	4.62								
# of Portfolios	234	233	231	223	211	186	159	113								
● DFA Emerging Markets	-3.40	(21)	11.60	(17)	36.90	(17)	13.51	(66)	6.28	(89)	8.08	(72)	4.25	(84)	--	(--)
▲ MSCI Emerging Markets Value NR USD	-5.08	(31)	4.43	(36)	28.43	(29)	10.05	(88)	4.77	(96)	6.87	(85)	3.05	(92)	3.79	(99)



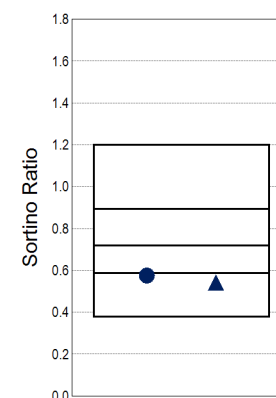
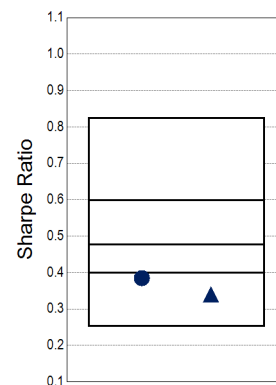
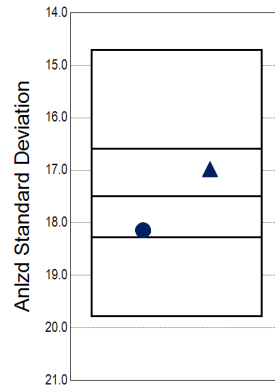
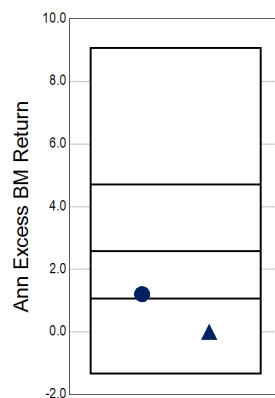
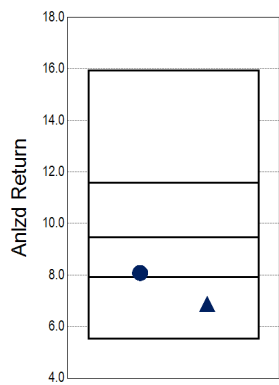
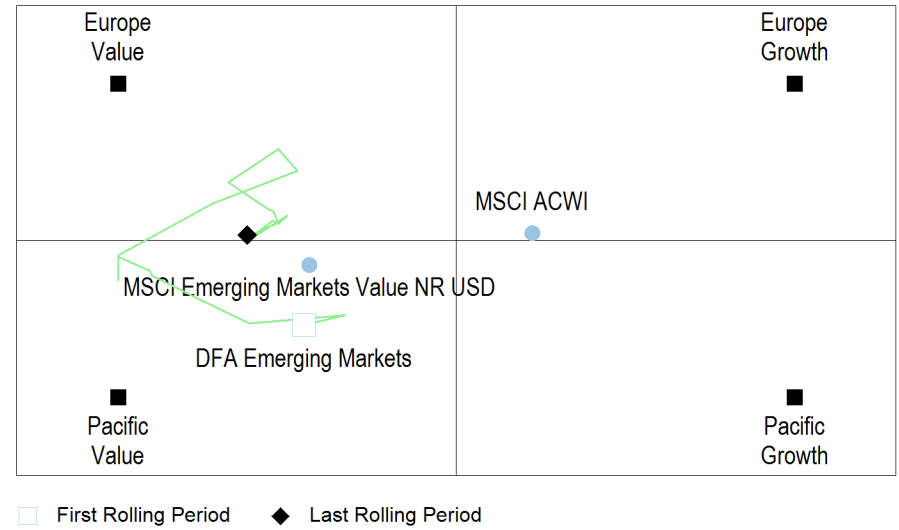
# Los Angeles City Employees' Retirement System

## DFA EMERGING MARKETS

5 Year Risk Return



5 Year Style Map



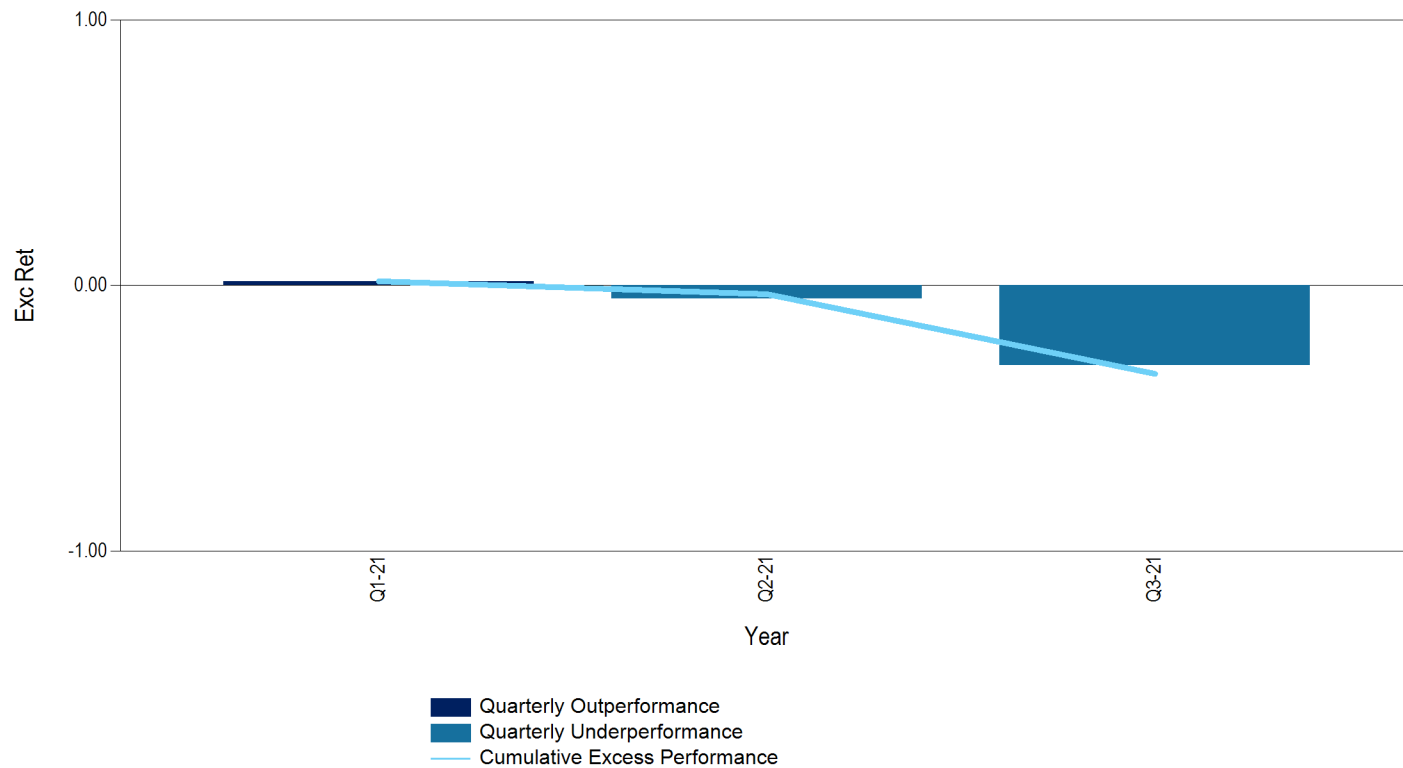
- DFA Emerging Markets
- ▲ MSCI Emerging Markets Value NR USD
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SSGA EMERGING MARKETS

Quarterly and Cumulative Excess Performance

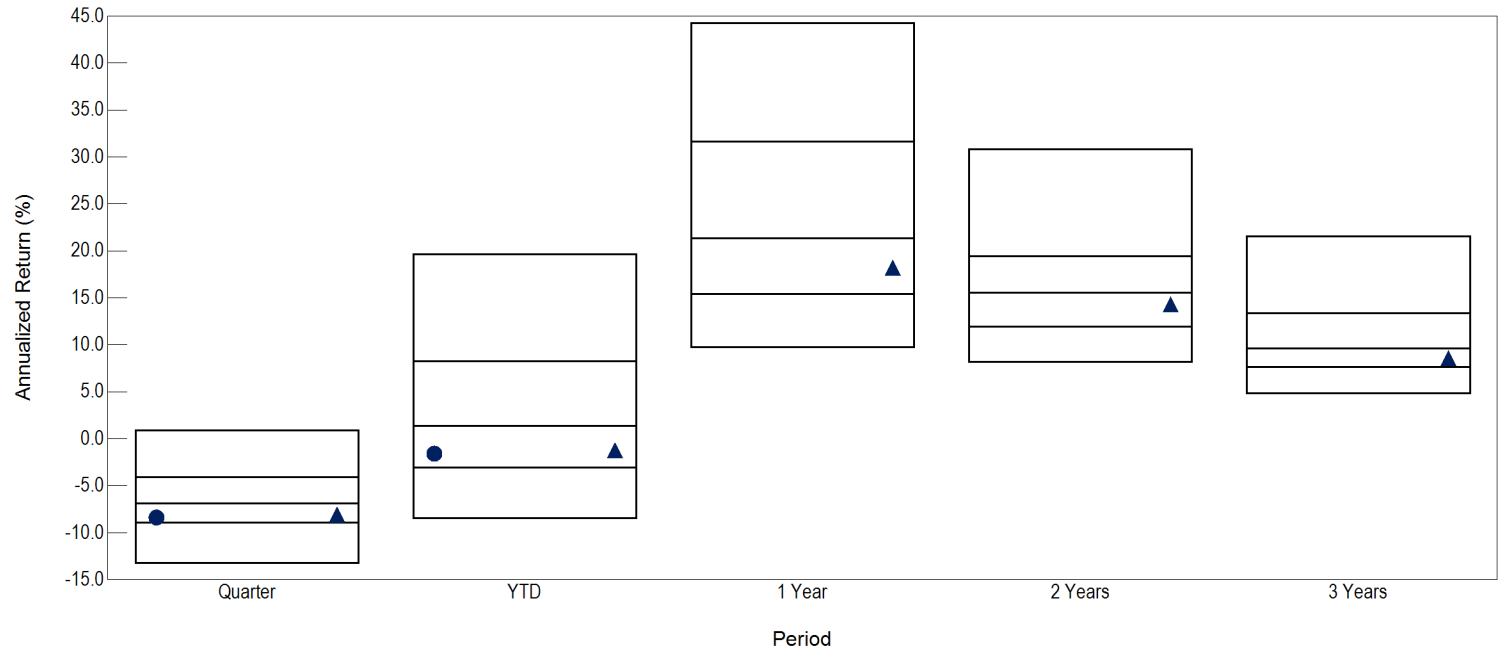




# Los Angeles City Employees' Retirement System

## SSGA EMERGING MARKETS

State Street Emerging Markets vs. eV Emg Mkts Equity Net



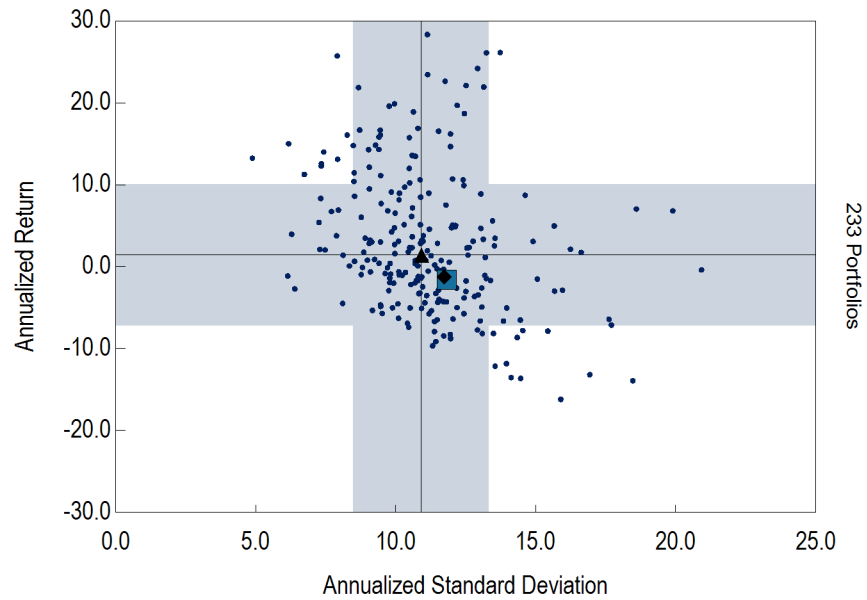
	Return (Rank)									
5th Percentile	0.91		19.63		44.28		30.83		21.51	
25th Percentile	-4.00		8.32		31.73		19.52		13.44	
Median	-6.84		1.41		21.38		15.59		9.68	
75th Percentile	-8.86		-2.99		15.47		11.97		7.68	
95th Percentile	-13.19		-8.36		9.84		8.28		4.92	
# of Portfolios	234		233		231		223		211	
● State Street Emerging Markets	-8.39	(69)	-1.60	(68)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets	-8.09	(65)	-1.25	(66)	18.20	(67)	14.31	(58)	8.58	(63)



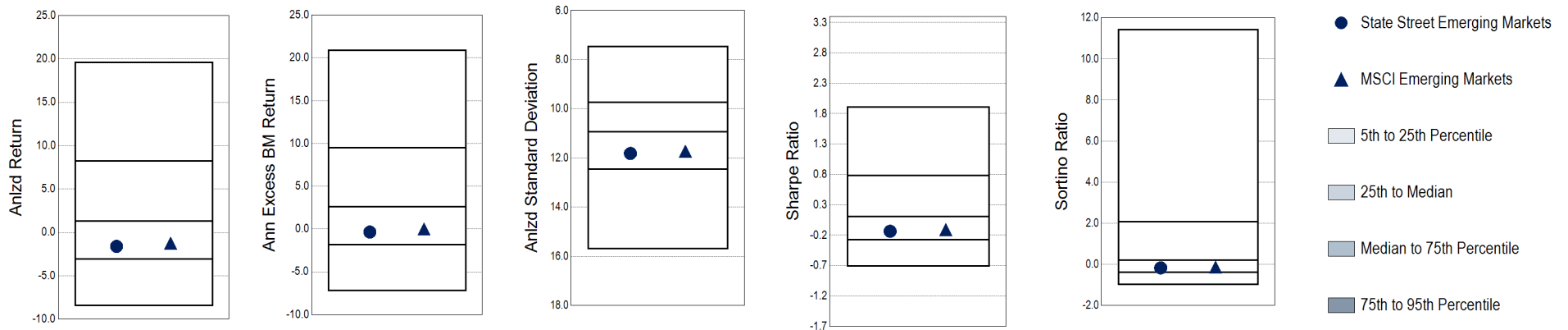
# Los Angeles City Employees' Retirement System

## SSGA EMERGING MARKETS

Since Inception Risk Return

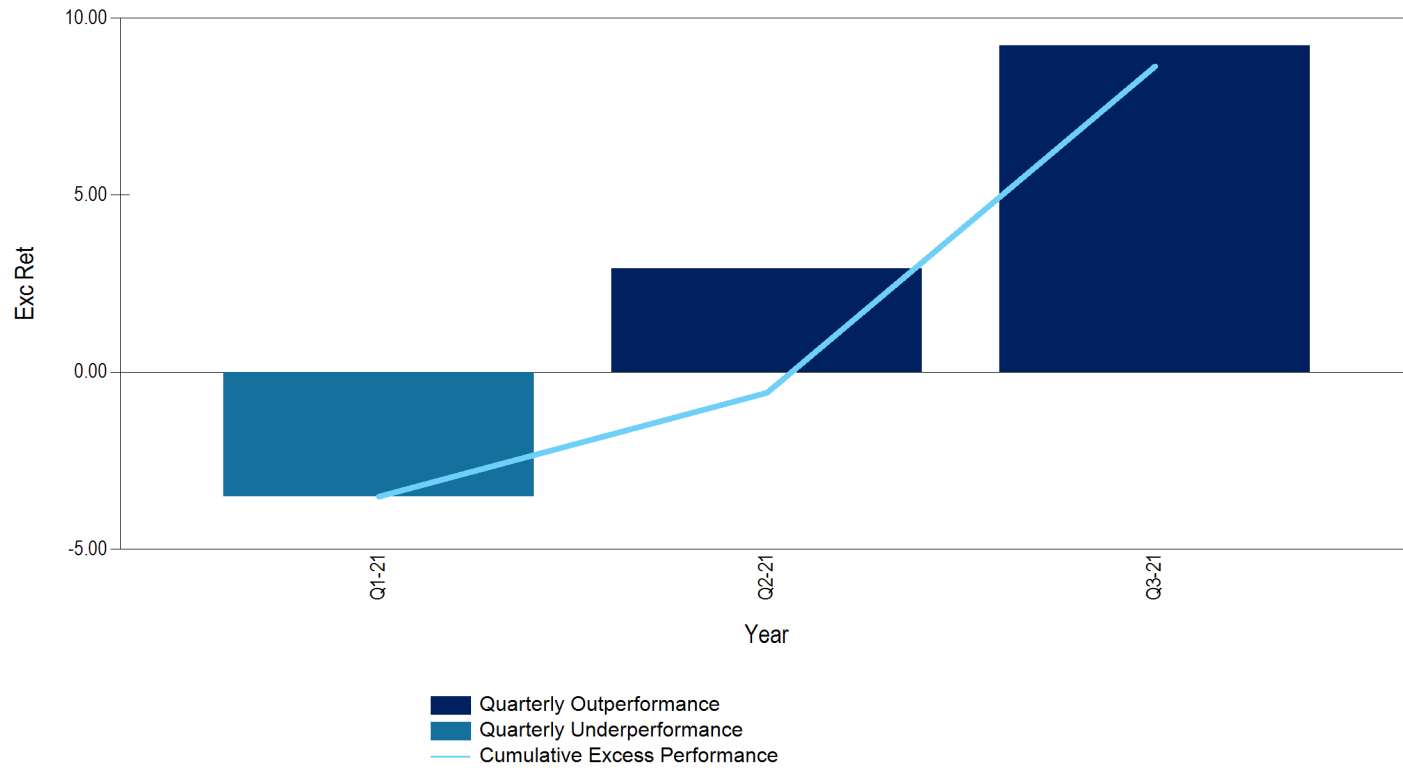


Non U.S. Regional Effective Style Map



# Los Angeles City Employees' Retirement System WASATCH GLOBAL INVESTORS

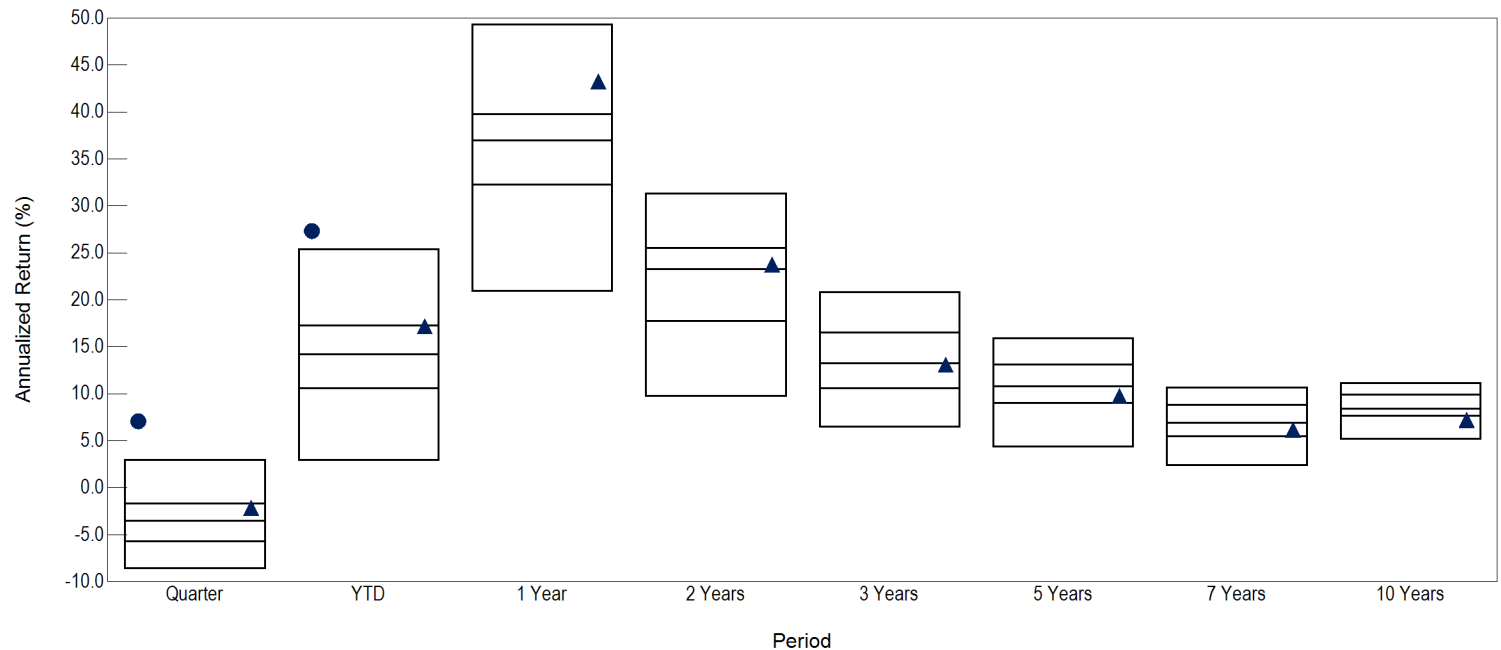
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## WASATCH GLOBAL INVESTORS

Wasatch Global Investors vs. eV Emg Mkts Small Cap Equity Net

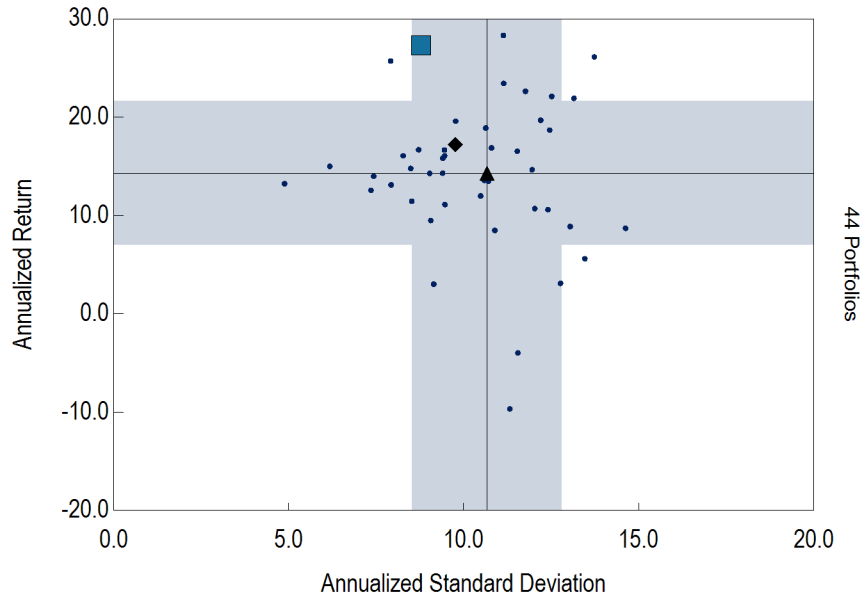


	Return (Rank)															
5th Percentile	2.95	25.37	49.33	31.30	20.80	15.91	10.69	11.15								
25th Percentile	-1.60	17.32	39.85	25.61	16.57	13.15	8.91	9.98								
Median	-3.43	14.29	37.06	23.33	13.32	10.83	6.97	8.47								
75th Percentile	-5.62	10.67	32.33	17.82	10.63	9.06	5.54	7.73								
95th Percentile	-8.49	3.03	21.03	9.81	6.57	4.43	2.47	5.28								
# of Portfolios	44	44	43	42	40	30	26	9								
● Wasatch Global Investors	7.06	(1)	27.32	(2)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ MSCI Emerging Markets Small Cap	-2.16	(34)	17.20	(26)	43.24	(14)	23.74	(47)	13.11	(54)	9.75	(65)	6.17	(67)	7.21	(81)

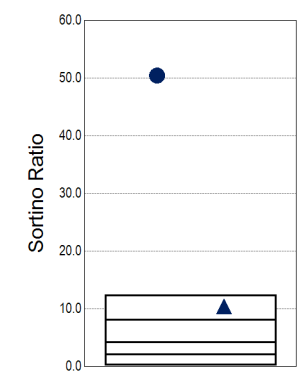
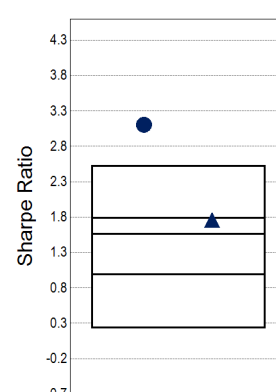
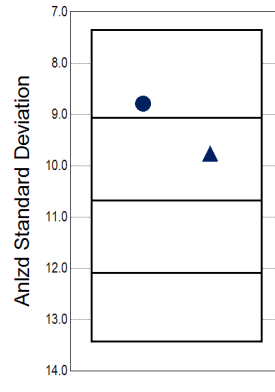
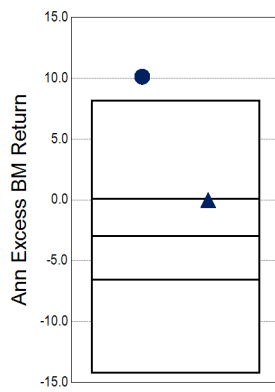
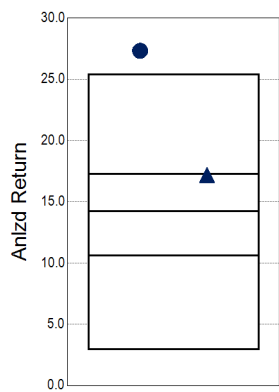


# Los Angeles City Employees' Retirement System WASATCH GLOBAL INVESTORS

Since Inception Risk Return



Non U.S. Regional Effective Style Map



- Wasatch Global Investors
- ▲ MSCI Emerging Markets Small Cap
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile





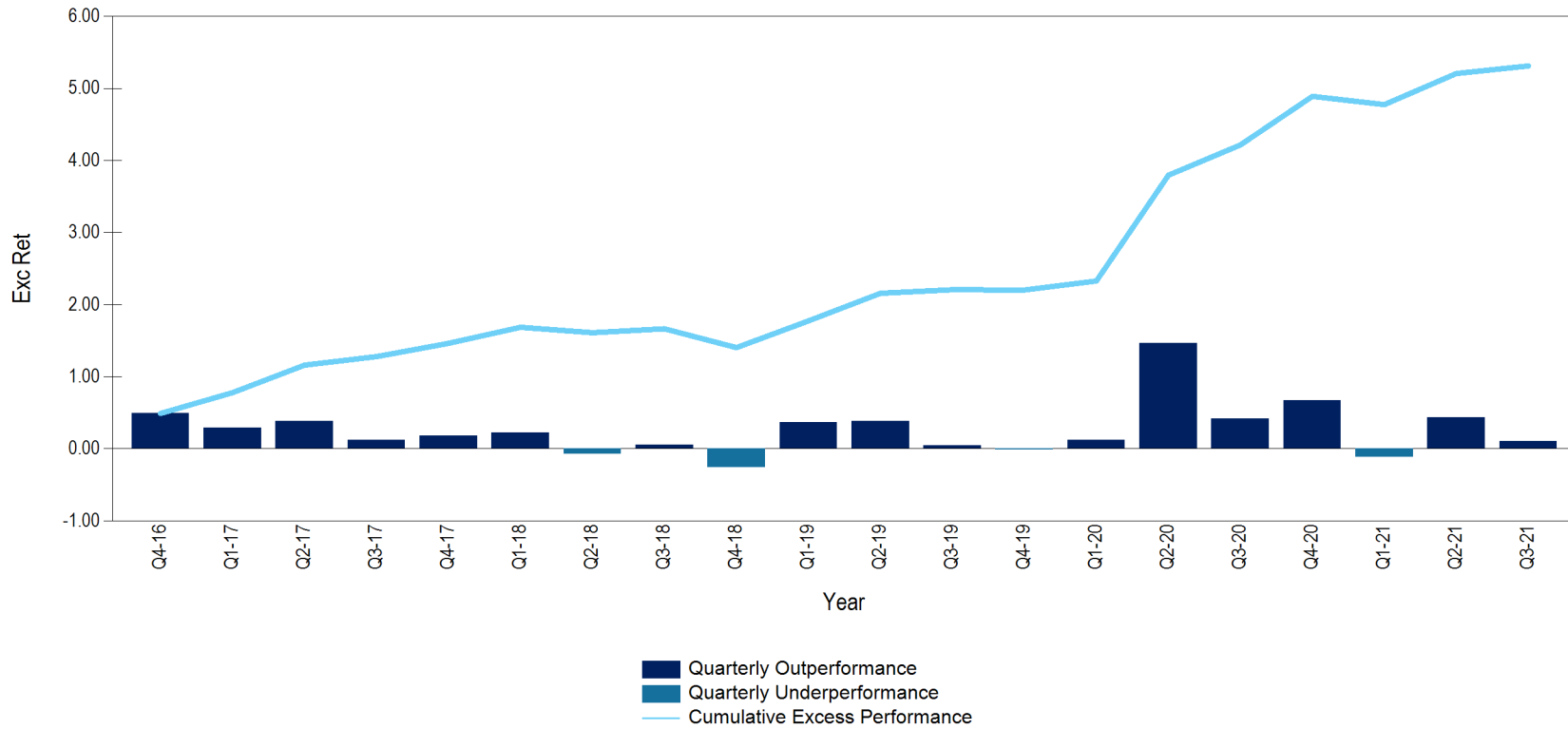
# CORE FIXED INCOME MANAGER PERFORMANCE



# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES & CO. CORE FIXED INCOME

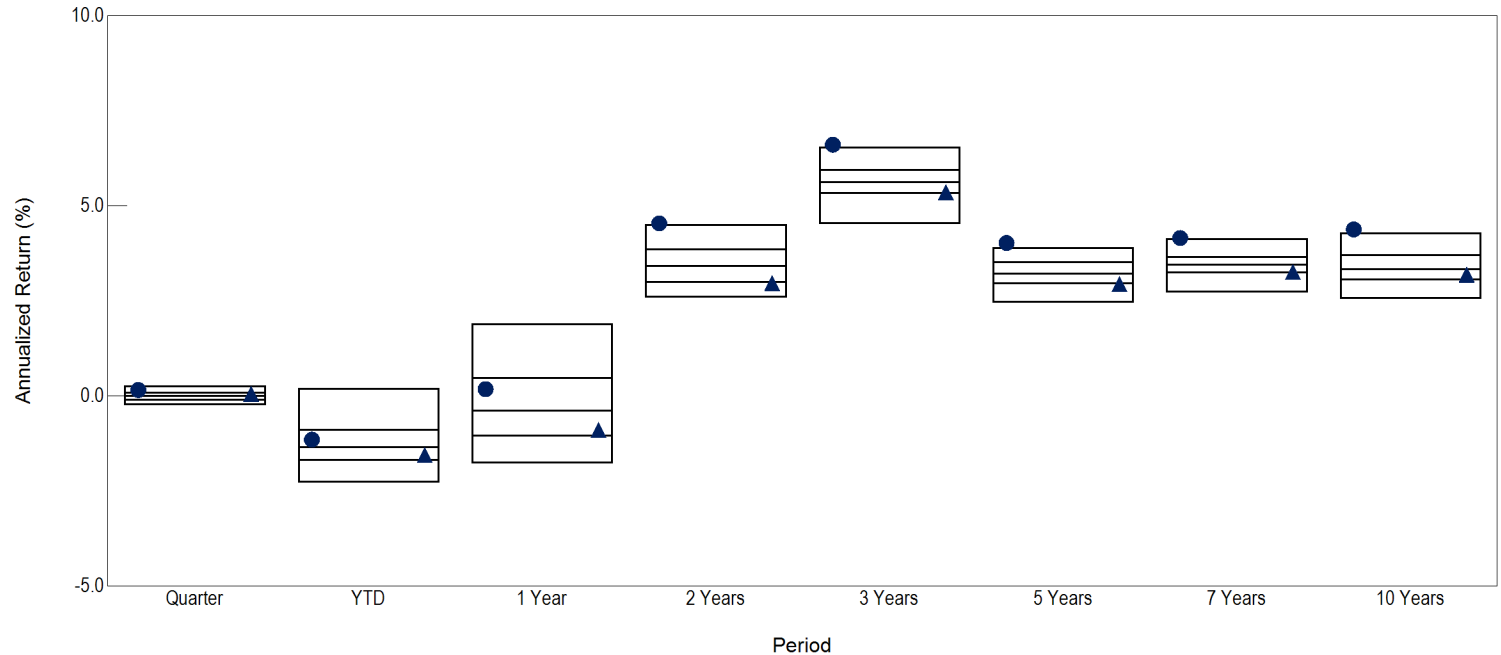
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES & CO. CORE FIXED INCOME

Loomis Sayles & Co. Core Fixed Income vs. eV US Core Fixed Inc Net



	Return (Rank)															
5th Percentile	0.26	0.18	1.89	4.50	6.54	3.89	4.13	4.27								
25th Percentile	0.11	-0.87	0.48	3.87	5.96	3.53	3.67	3.73								
Median	0.02	-1.34	-0.37	3.43	5.64	3.23	3.47	3.36								
75th Percentile	-0.08	-1.67	-1.02	3.01	5.36	2.98	3.27	3.07								
95th Percentile	-0.20	-2.23	-1.74	2.63	4.56	2.49	2.76	2.59								
# of Portfolios	148	147	146	143	141	139	134	126								
● Loomis Sayles & Co. Core Fixed Income	0.16	(14)	-1.15	(40)	0.18	(31)	4.54	(5)	6.61	(4)	4.02	(3)	4.15	(5)	4.38	(5)
▲ Loomis Custom Benchmark	0.05	(38)	-1.55	(65)	-0.90	(70)	2.97	(80)	5.36	(76)	2.94	(78)	3.26	(76)	3.19	(68)

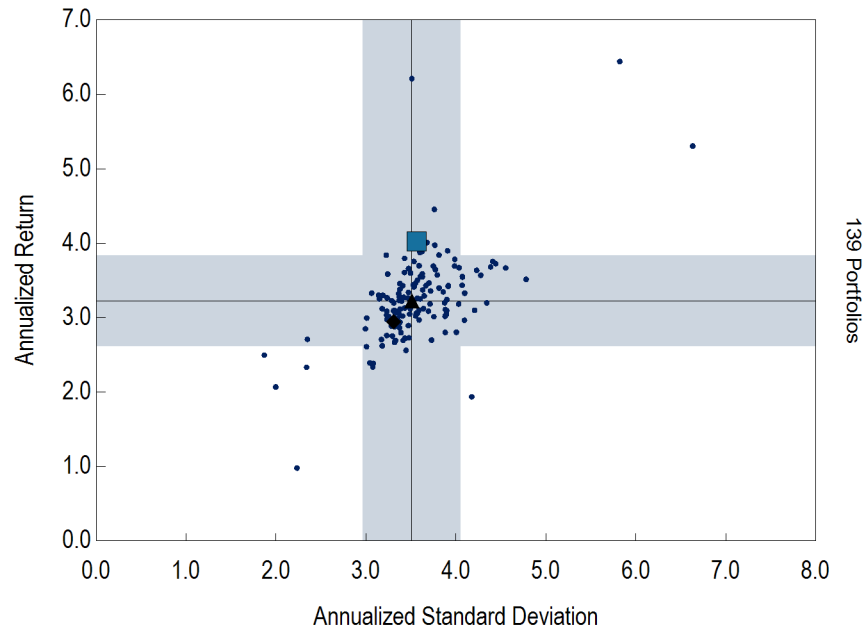




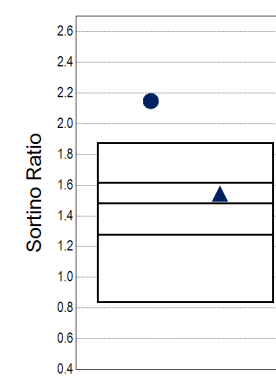
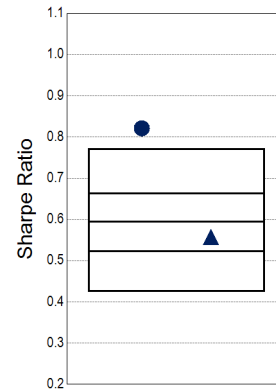
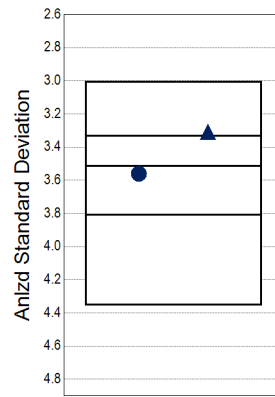
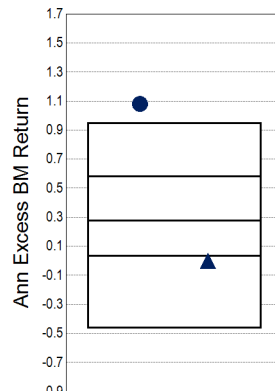
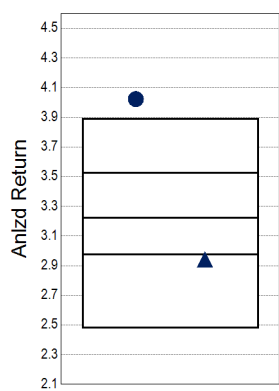
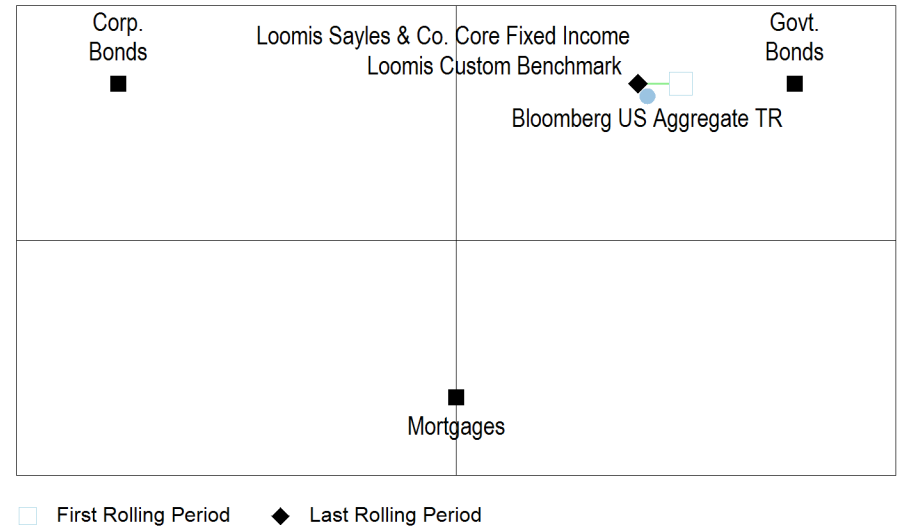
# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES & CO. CORE FIXED INCOME

5 Year Risk Return



5 Year Style Map



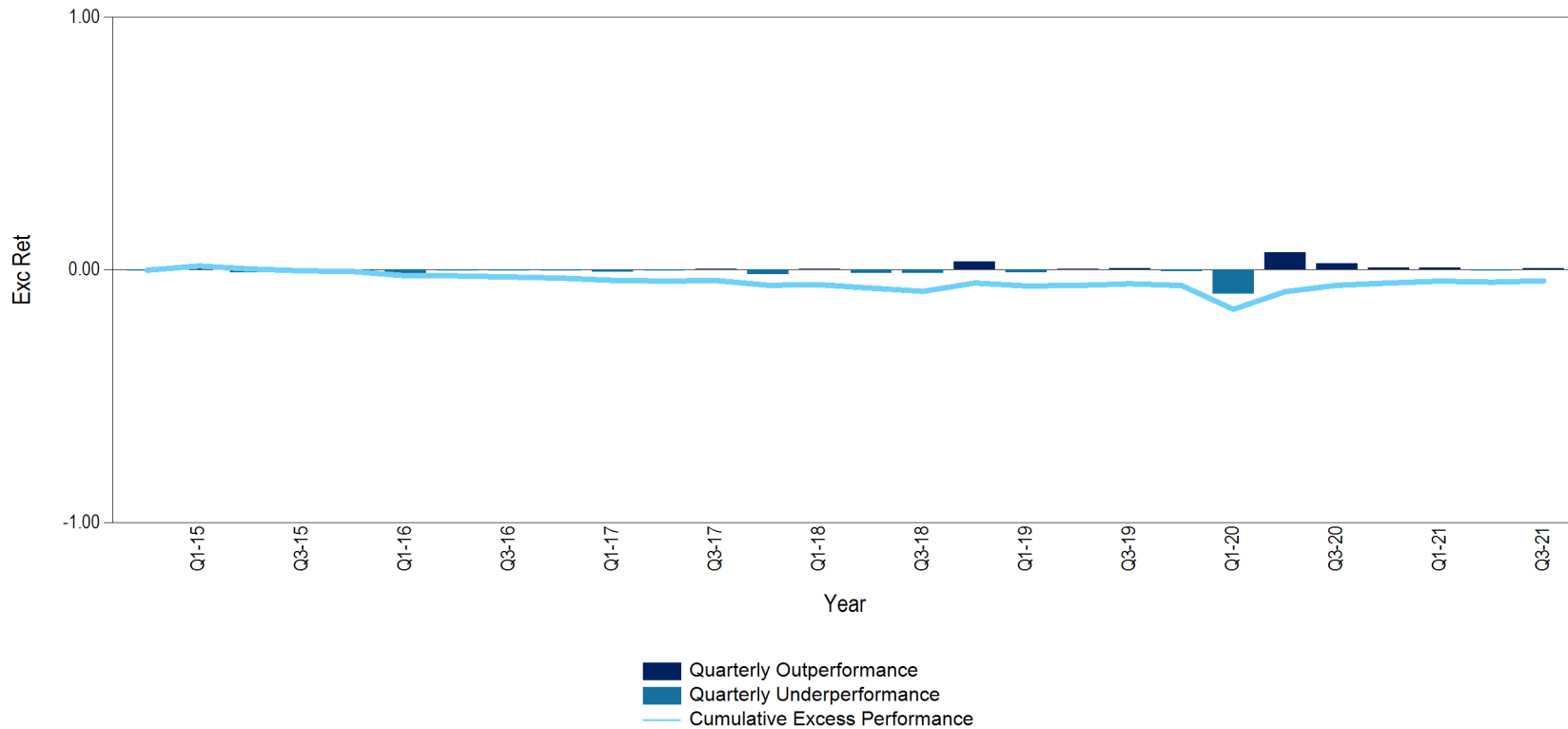
- Loomis Sayles & Co. Core Fixed Income
- ▲ Loomis Custom Benchmark
- 5th to 25th Percentile
- ▒ 25th to Median
- ▓ Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

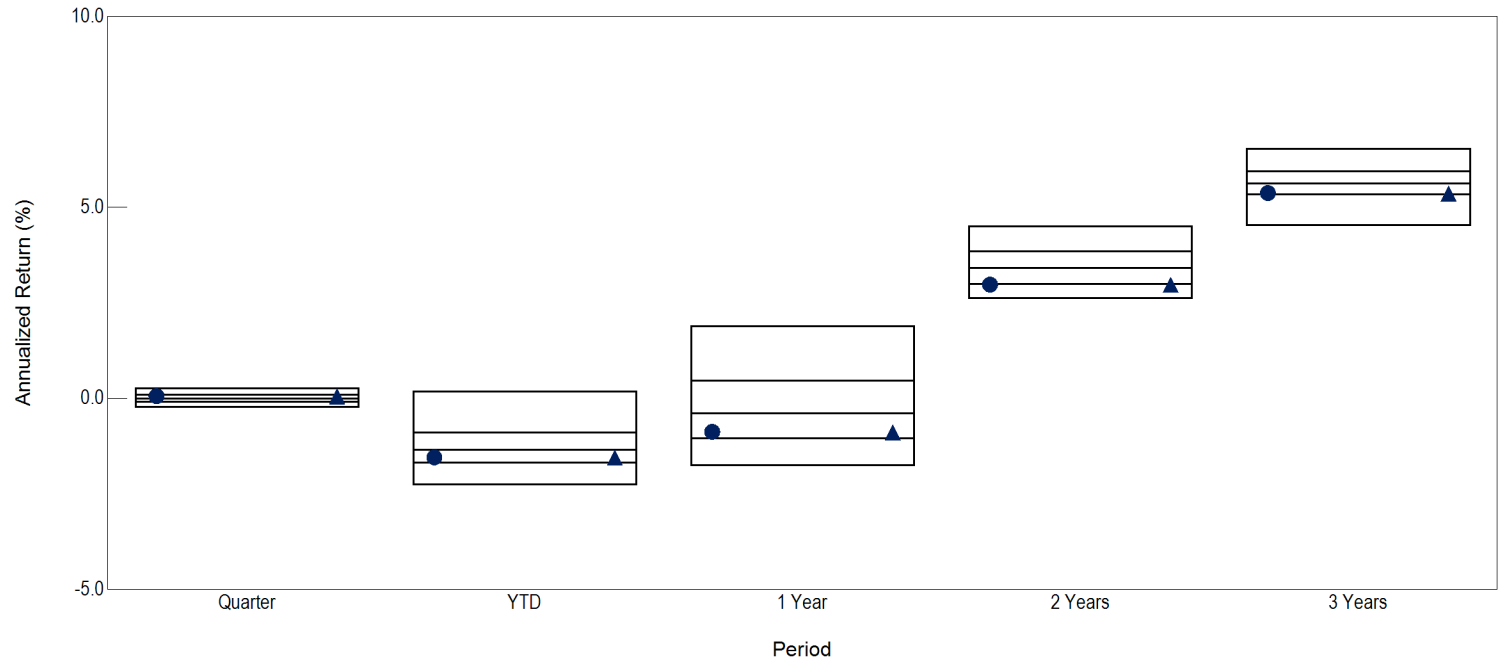
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

SSgA U.S. Aggregate Bond vs. eV US Core Fixed Inc Net



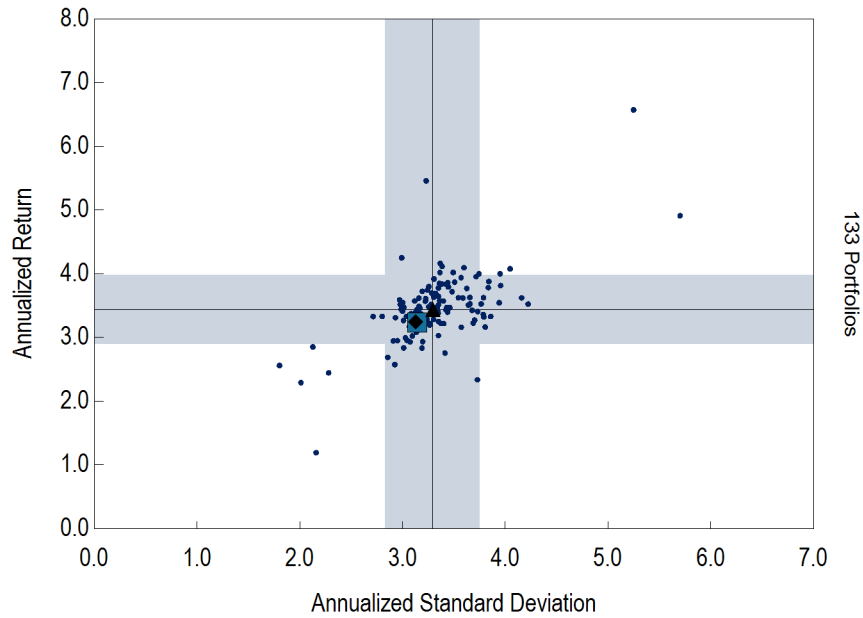
	Return (Rank)									
5th Percentile	0.26		0.18		1.89		4.50		6.54	
25th Percentile	0.11		-0.87		0.48		3.87		5.96	
Median	0.02		-1.34		-0.37		3.43		5.64	
75th Percentile	-0.08		-1.67		-1.02		3.01		5.36	
95th Percentile	-0.20		-2.23		-1.74		2.63		4.56	
# of Portfolios	148		147		146		143		141	
● SSGA U.S. Aggregate Bond	0.06	(37)	-1.55	(65)	-0.88	(69)	2.98	(79)	5.37	(74)
▲ Bloomberg US Aggregate TR	0.05	(38)	-1.55	(65)	-0.90	(70)	2.97	(80)	5.36	(76)



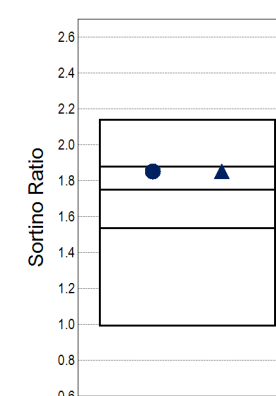
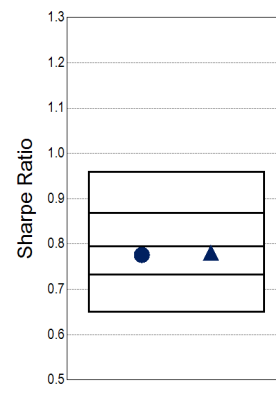
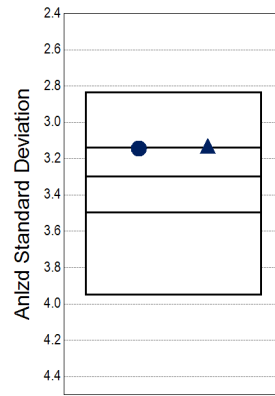
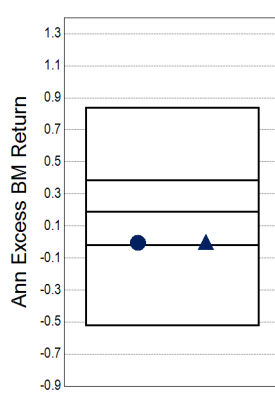
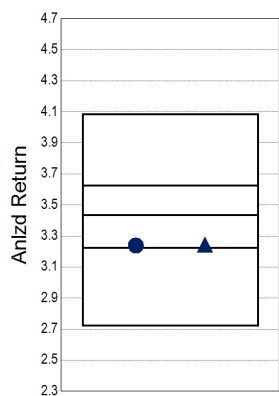
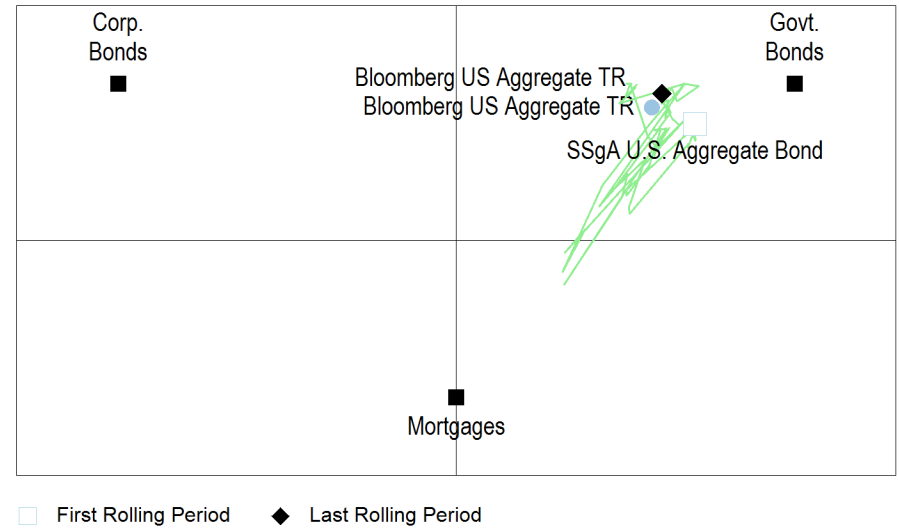
# Los Angeles City Employees' Retirement System

## SSGA U.S. AGGREGATE BOND

Since Inception Risk Return



Since Inception Style Map



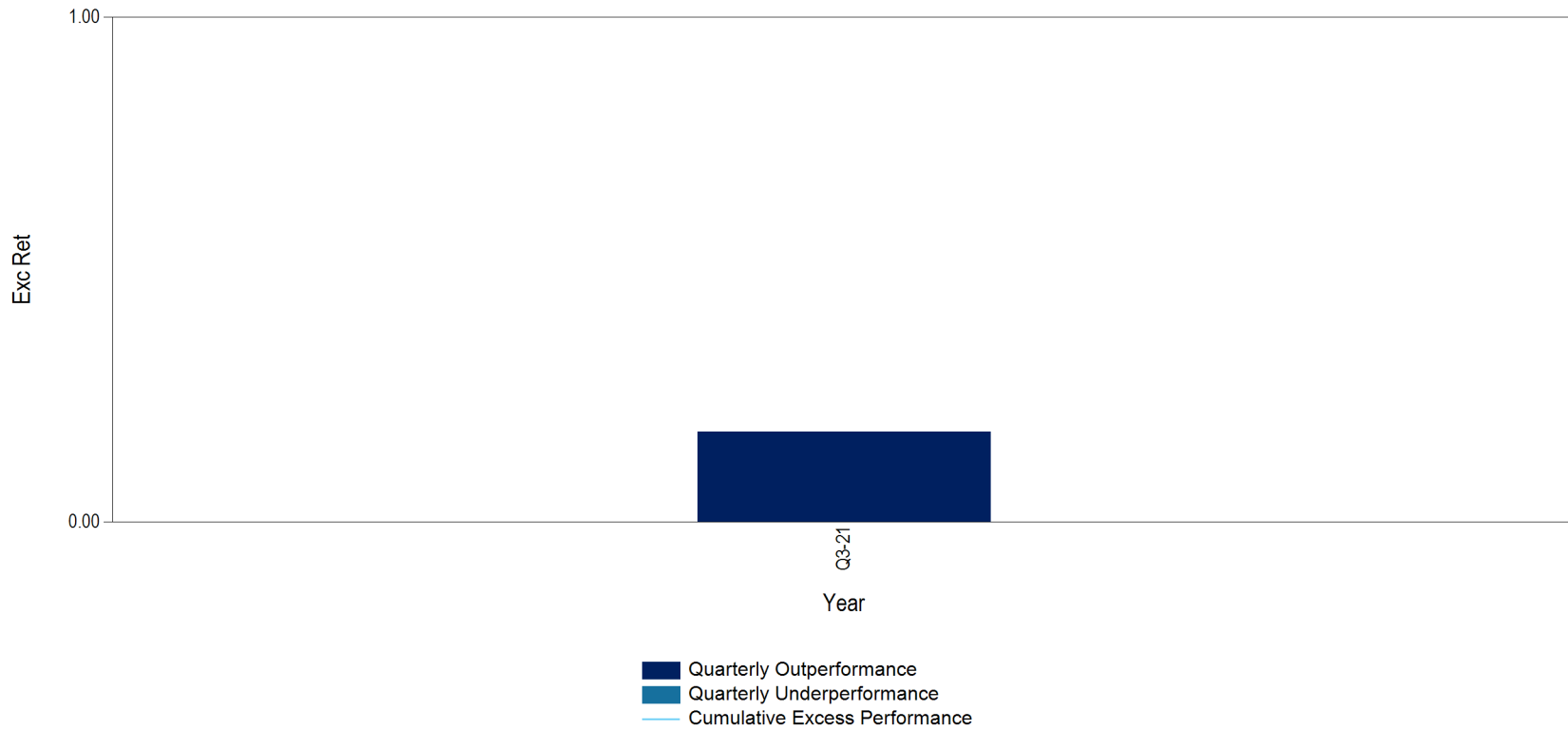
- SSGA U.S. Aggregate Bond
- ▲ Bloomberg US Aggregate TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## BAIRD ADVISORS CORE FIXED INCOME

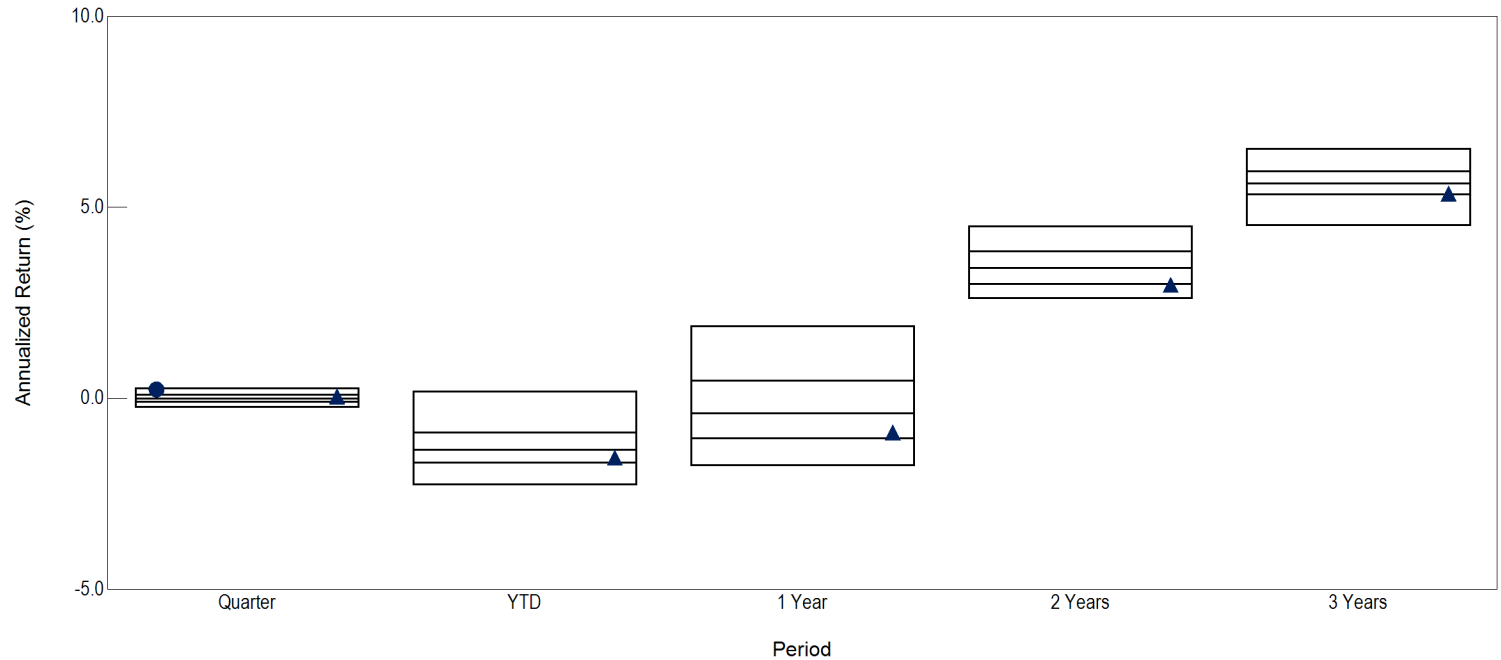
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## BAIRD ADVISORS CORE FIXED INCOME

Baird Advisors Core Fixed Income vs. eV US Core Fixed Inc Net



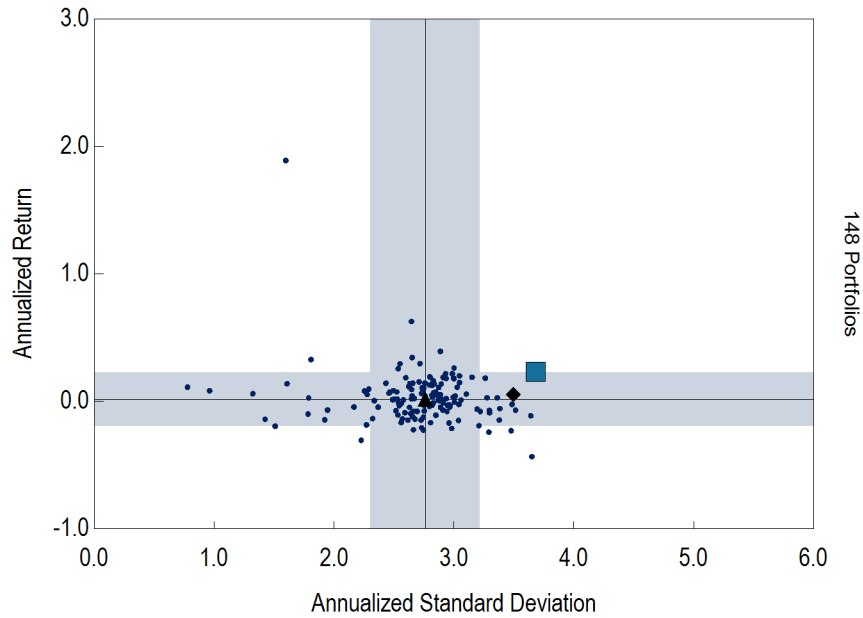
	Return (Rank)									
5th Percentile	0.26		0.18		1.89		4.50		6.54	
25th Percentile	0.11		-0.87		0.48		3.87		5.96	
Median	0.02		-1.34		-0.37		3.43		5.64	
75th Percentile	-0.08		-1.67		-1.02		3.01		5.36	
95th Percentile	-0.20		-2.23		-1.74		2.63		4.56	
# of Portfolios	148		147		146		143		141	
● Baird Advisors Core Fixed Income	0.23	(6)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Bloomberg US Aggregate TR	0.05	(38)	-1.55	(65)	-0.90	(70)	2.97	(80)	5.36	(76)



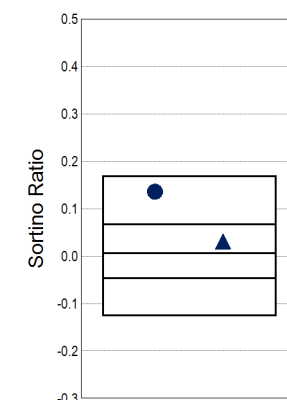
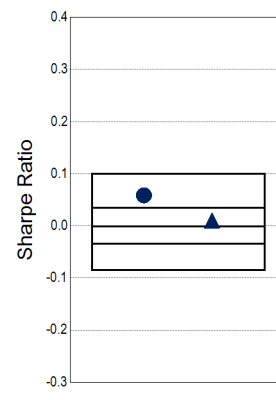
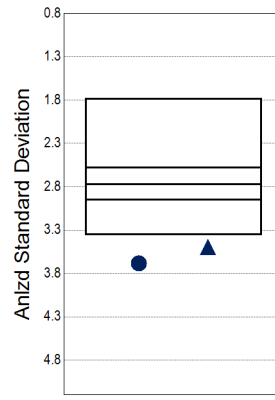
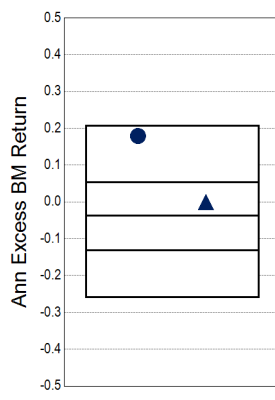
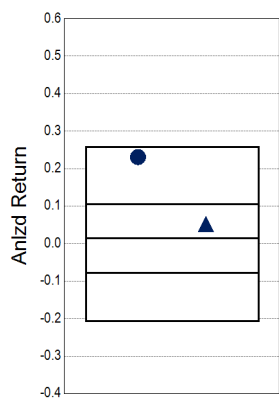
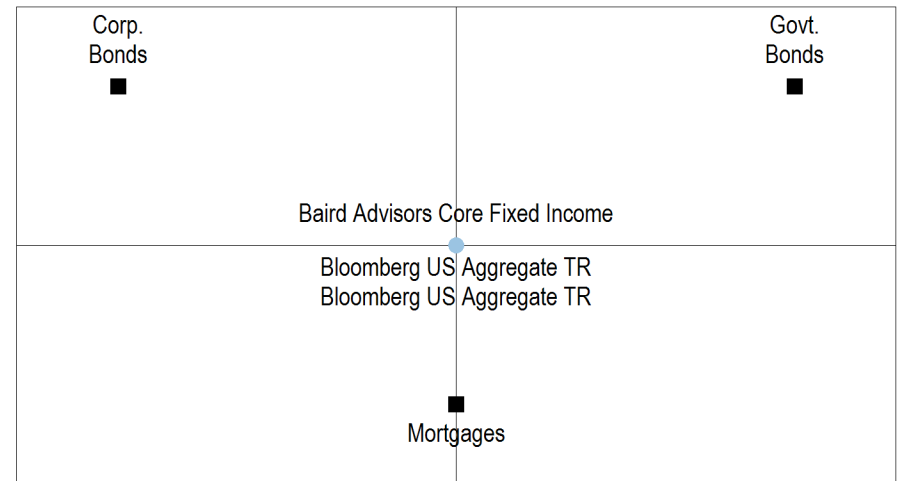
# Los Angeles City Employees' Retirement System

## BAIRD ADVISORS CORE FIXED INCOME

Since Inception Risk Return



Fixed Income Style Map  
3 Months Ending September 30, 2021



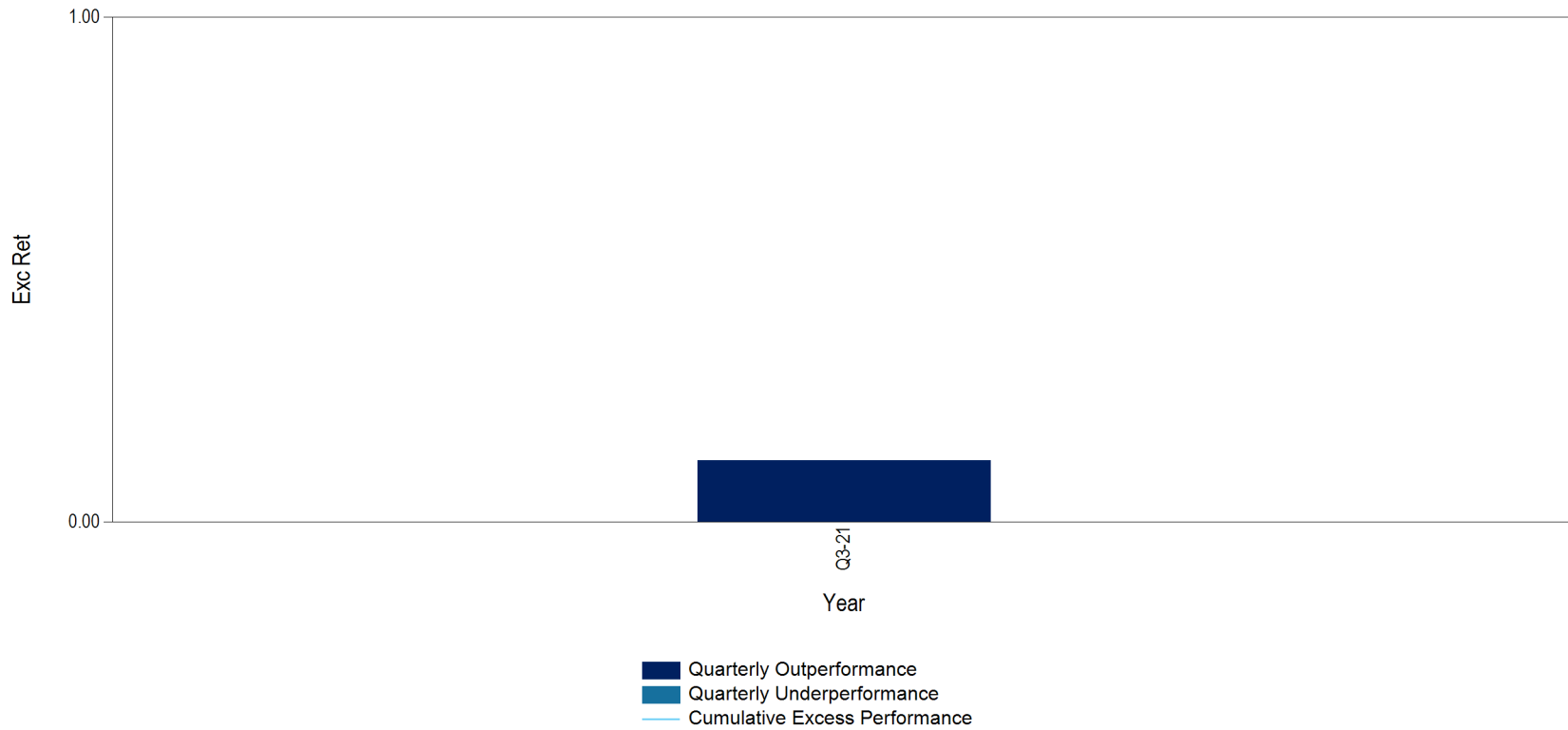
- Baird Advisors Core Fixed Income
- ▲ Bloomberg US Aggregate TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## JP MORGAN INVESTMENT MANAGEMENT

Quarterly and Cumulative Excess Performance

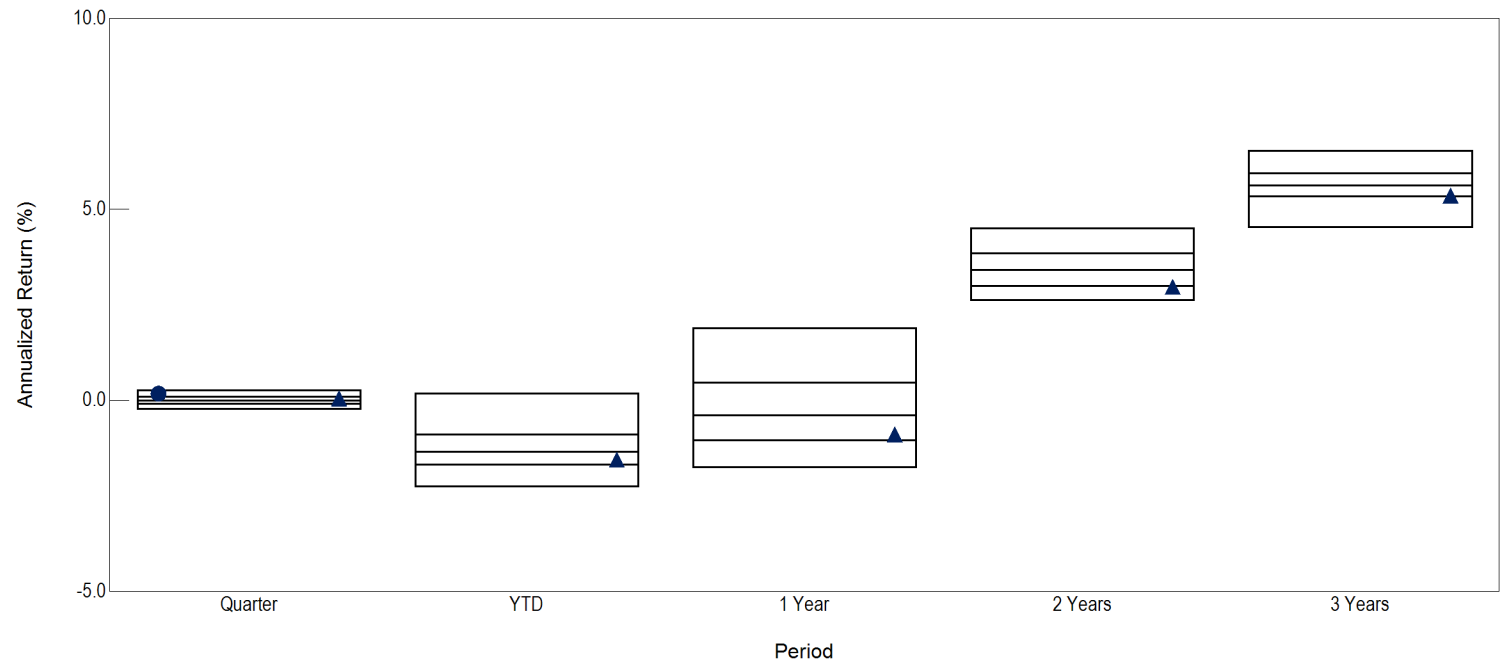




# Los Angeles City Employees' Retirement System

## JP MORGAN INVESTMENT MANAGEMENT

JP Morgan Investment Management vs. eV US Core Fixed Inc Net



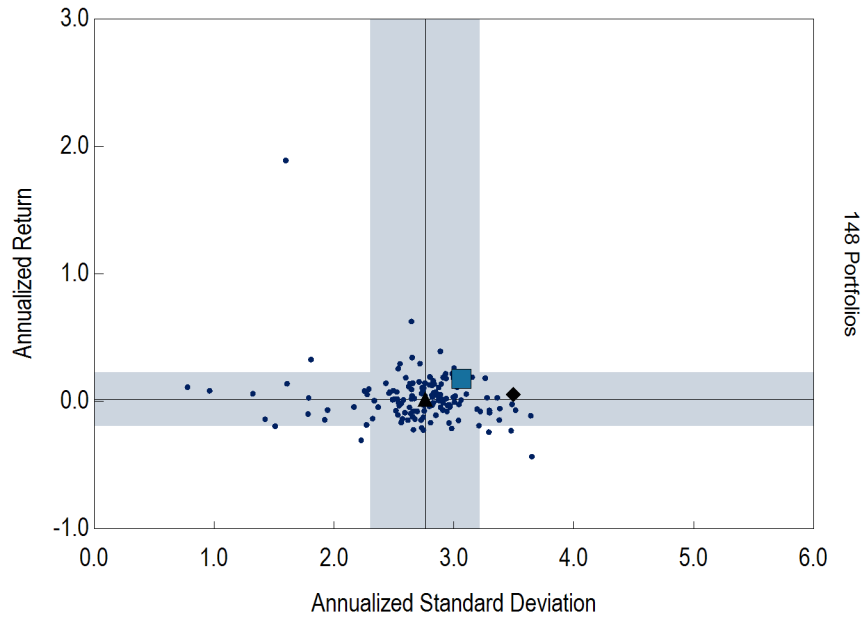
	Return (Rank)									
5th Percentile	0.26	0.18	1.89	4.50	6.54					
25th Percentile	0.11	-0.87	0.48	3.87	5.96					
Median	0.02	-1.34	-0.37	3.43	5.64					
75th Percentile	-0.08	-1.67	-1.02	3.01	5.36					
95th Percentile	-0.20	-2.23	-1.74	2.63	4.56					
# of Portfolios	148	147	146	143	141					
● JP Morgan Investment Management	0.17	(14)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Bloomberg US Aggregate TR	0.05	(38)	-1.55	(65)	-0.90	(70)	2.97	(80)	5.36	(76)



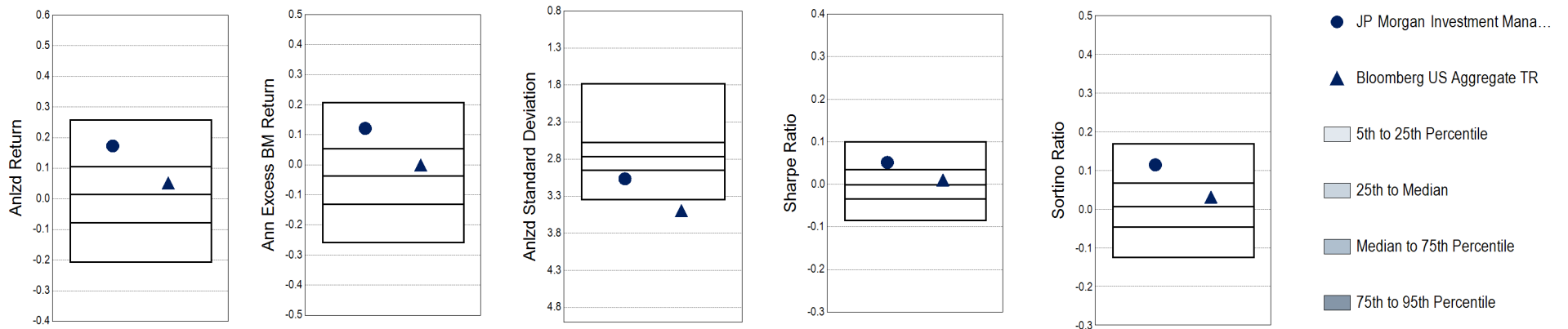
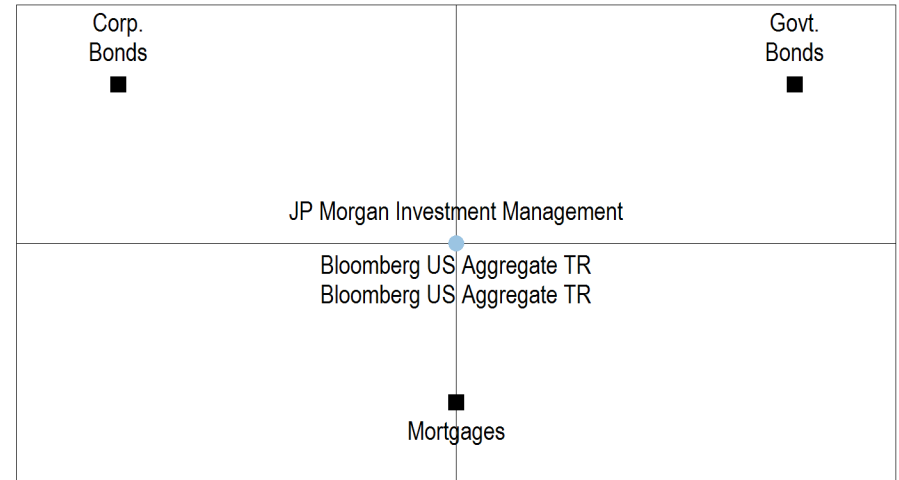
# Los Angeles City Employees' Retirement System

## JP MORGAN INVESTMENT MANAGEMENT

Since Inception Risk Return



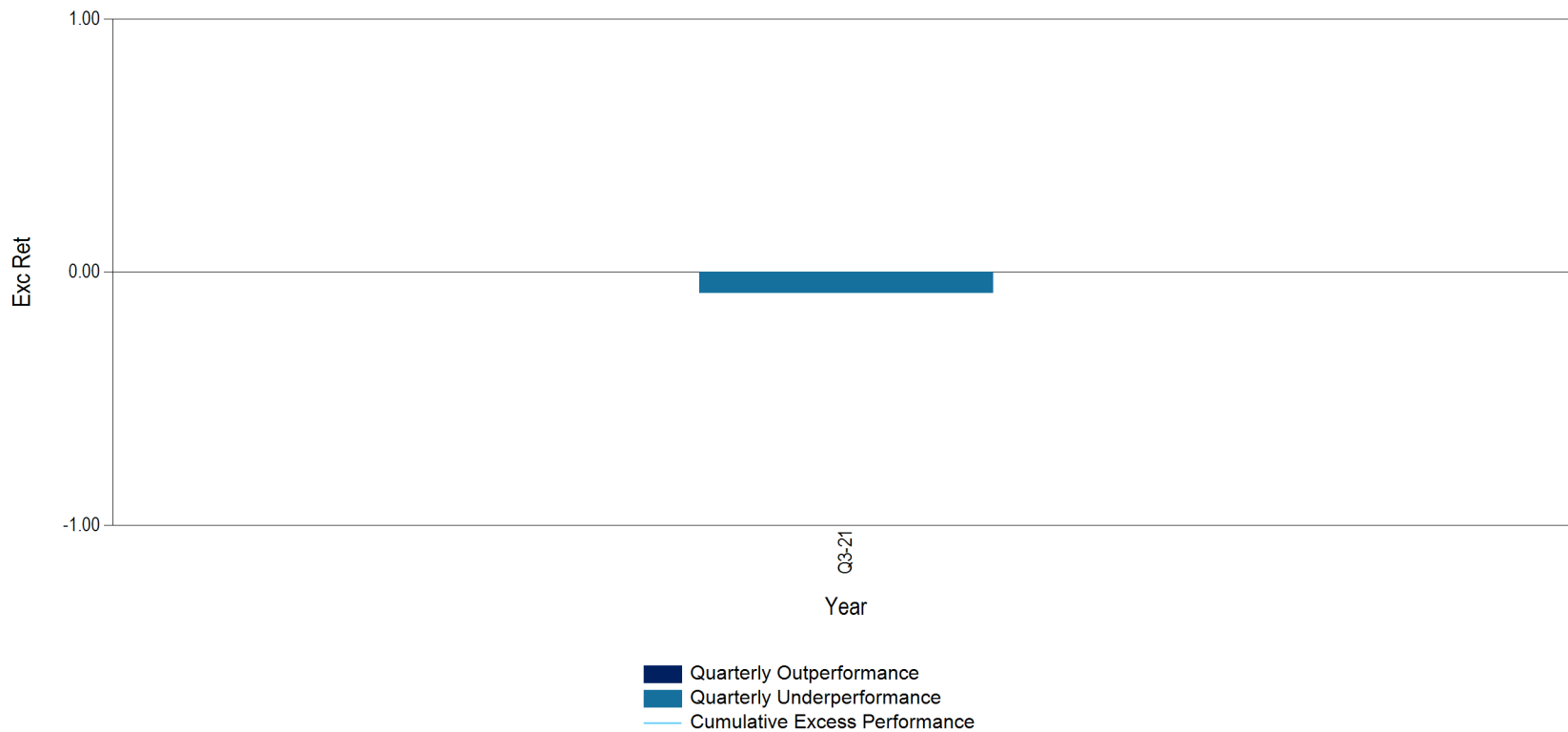
Fixed Income Style Map  
3 Months Ending September 30, 2021



# Los Angeles City Employees' Retirement System

## GARCIA HAMILTON & ASSOCIATES

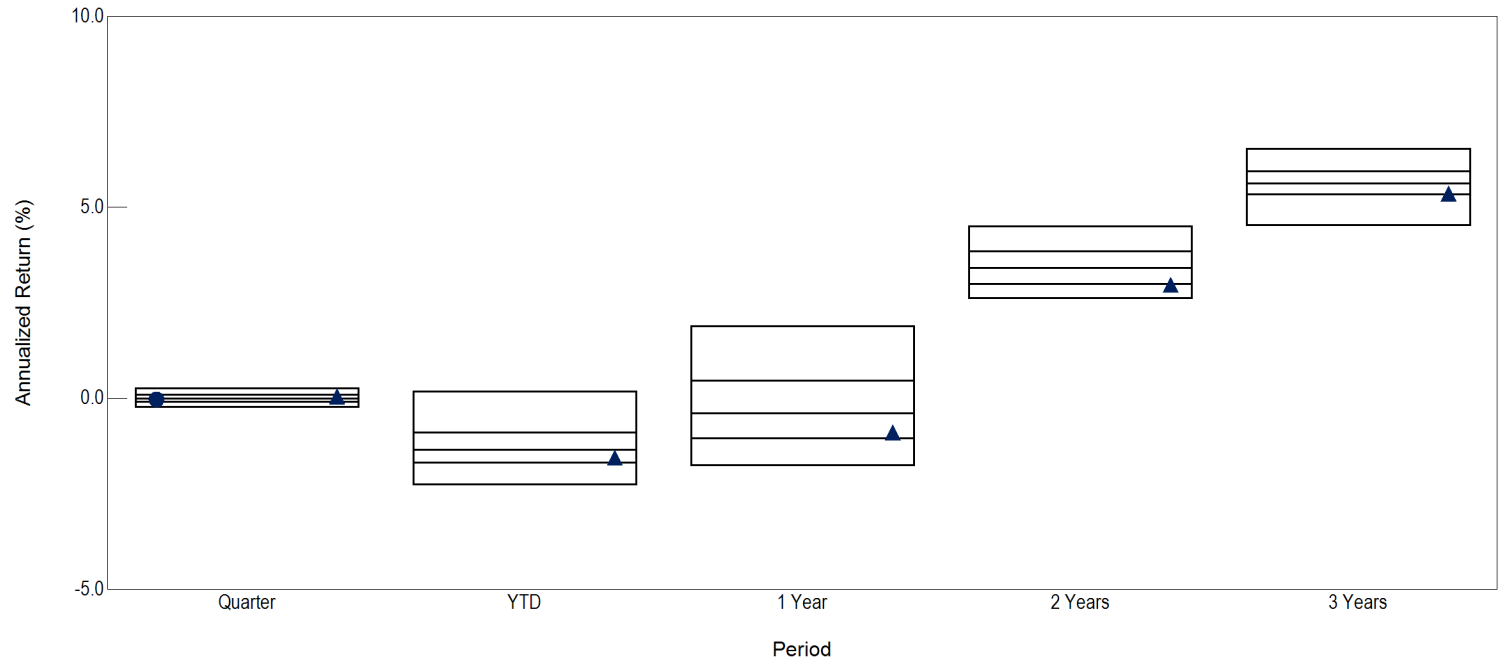
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## GARCIA HAMILTON & ASSOCIATES

Garcia Hamilton & Associates vs. eV US Core Fixed Inc Net



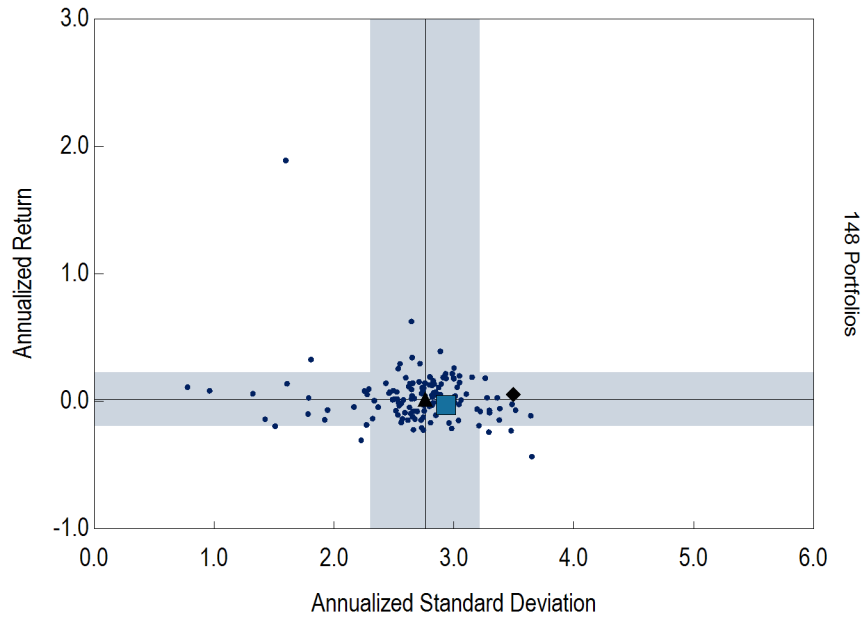
	Return (Rank)									
5th Percentile	0.26	0.18	1.89	4.50	6.54					
25th Percentile	0.11	-0.87	0.48	3.87	5.96					
Median	0.02	-1.34	-0.37	3.43	5.64					
75th Percentile	-0.08	-1.67	-1.02	3.01	5.36					
95th Percentile	-0.20	-2.23	-1.74	2.63	4.56					
# of Portfolios	148	147	146	143	141					
● Garcia Hamilton & Associates	-0.03	(64)	--	(--)	--	(--)	--	(--)	--	(--)
▲ Bloomberg US Aggregate TR	0.05	(38)	-1.55	(65)	-0.90	(70)	2.97	(80)	5.36	(76)



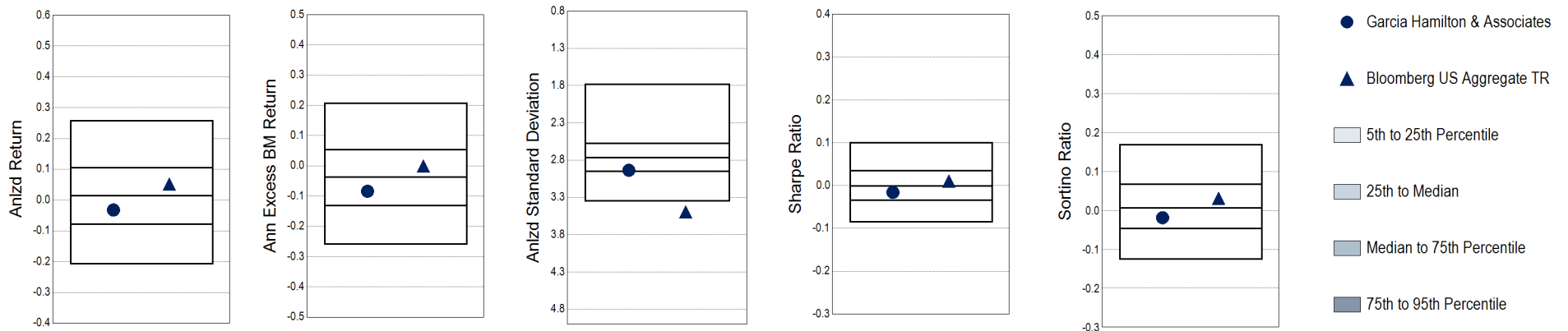
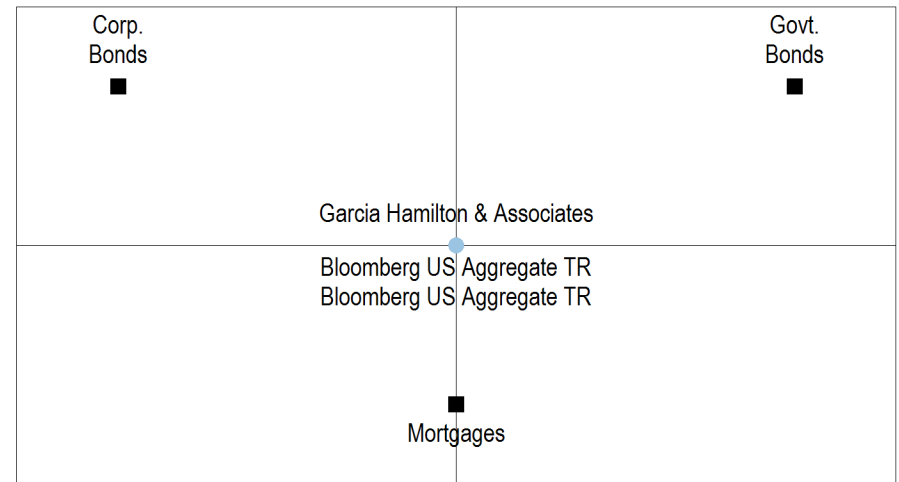
# Los Angeles City Employees' Retirement System

## GARCIA HAMILTON & ASSOCIATES

Since Inception Risk Return



Fixed Income Style Map  
3 Months Ending September 30, 2021





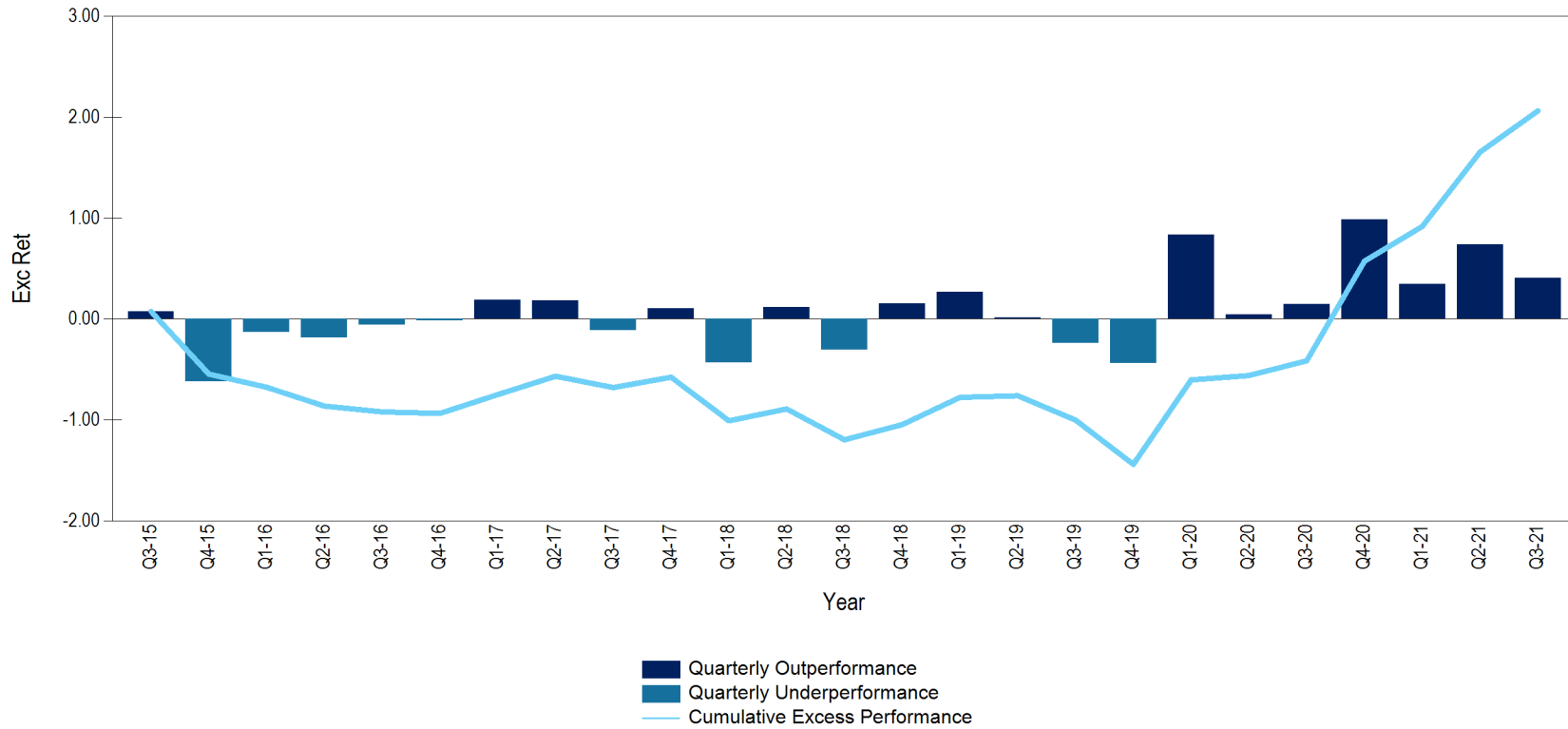
# CREDIT OPPORTUNITIES MANAGER PERFORMANCE



# Los Angeles City Employees' Retirement System

## BAIN CAPITAL SENIOR LOAN FUND, LP

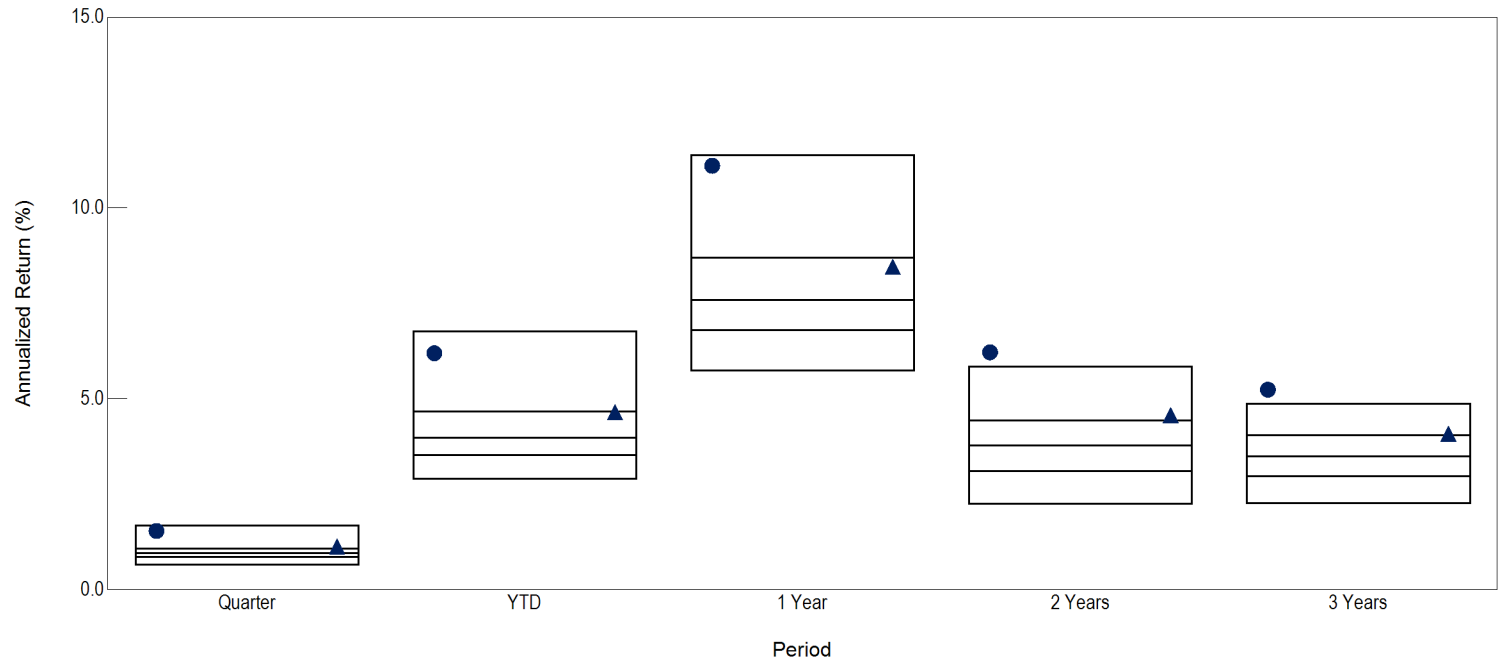
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## BAIN CAPITAL SENIOR LOAN FUND, LP

Bain Capital Senior Loan Fund, LP vs. eV US Float-Rate Bank Loan Fixed Inc Net



	Return (Rank)									
5th Percentile	1.69		6.77		11.38		5.85		4.87	
25th Percentile	1.10		4.69		8.72		4.46		4.06	
Median	0.98		4.00		7.60		3.80		3.51	
75th Percentile	0.88		3.54		6.81		3.13		3.00	
95th Percentile	0.67		2.92		5.76		2.27		2.29	
# of Portfolios	52		52		52		52		52	
● Bain Capital Senior Loan Fund, LP	1.54	(11)	6.20	(11)	11.11	(7)	6.22	(4)	5.24	(4)
▲ Credit Suisse Leveraged Loans	1.13	(22)	4.65	(27)	8.46	(28)	4.58	(25)	4.09	(24)

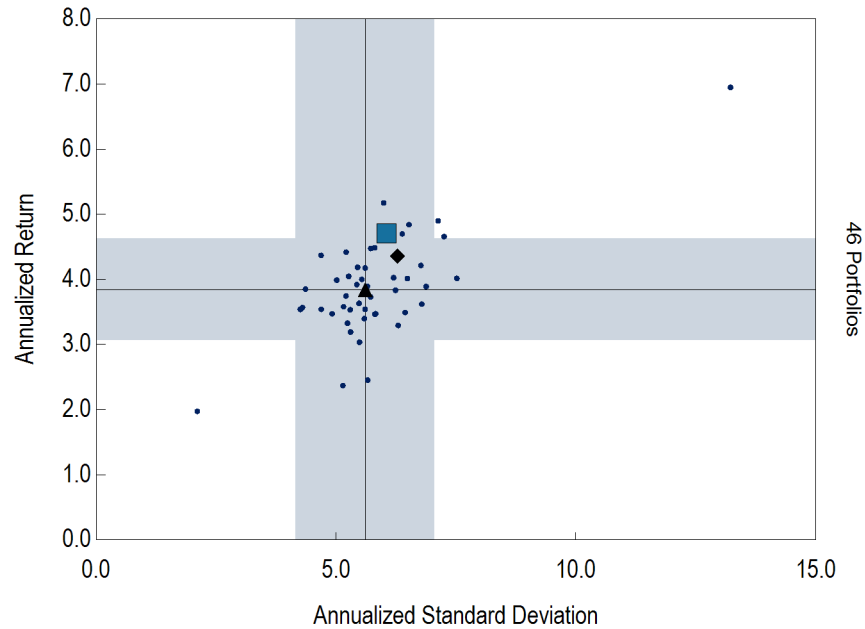




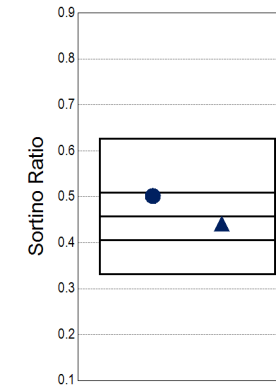
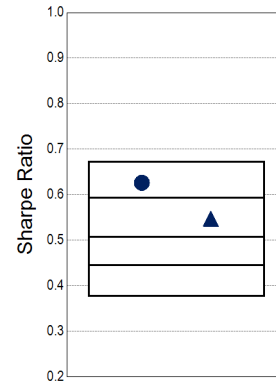
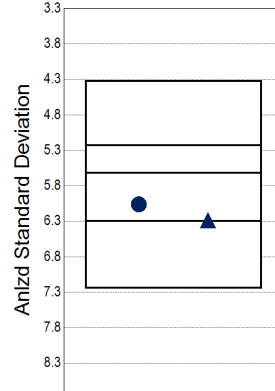
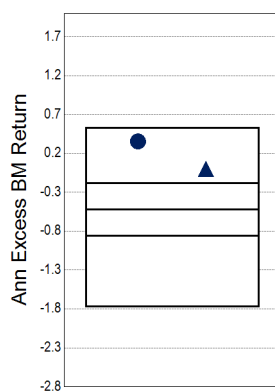
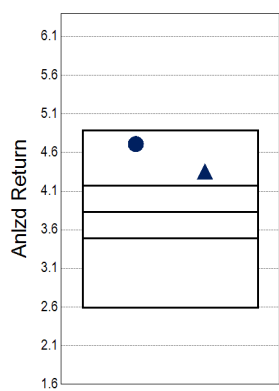
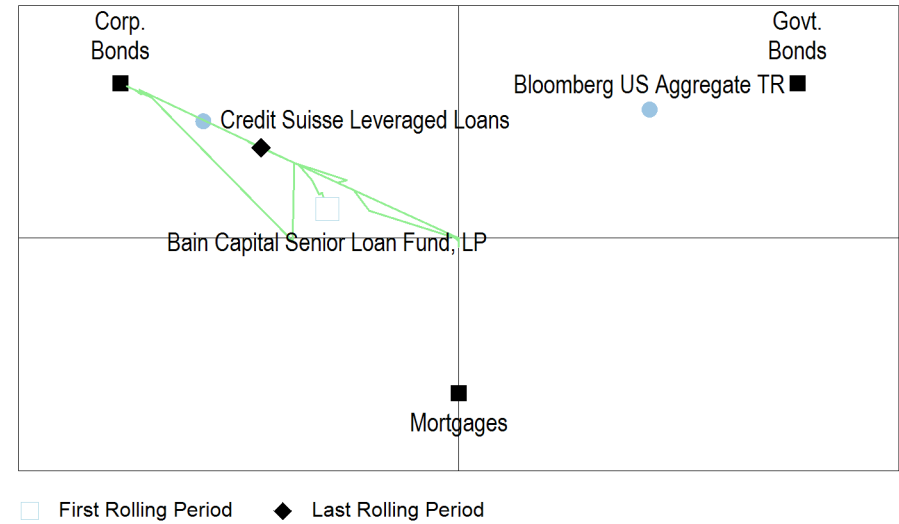
# Los Angeles City Employees' Retirement System

## BAIN CAPITAL SENIOR LOAN FUND, LP

Since Inception Risk Return



Since Inception Style Map



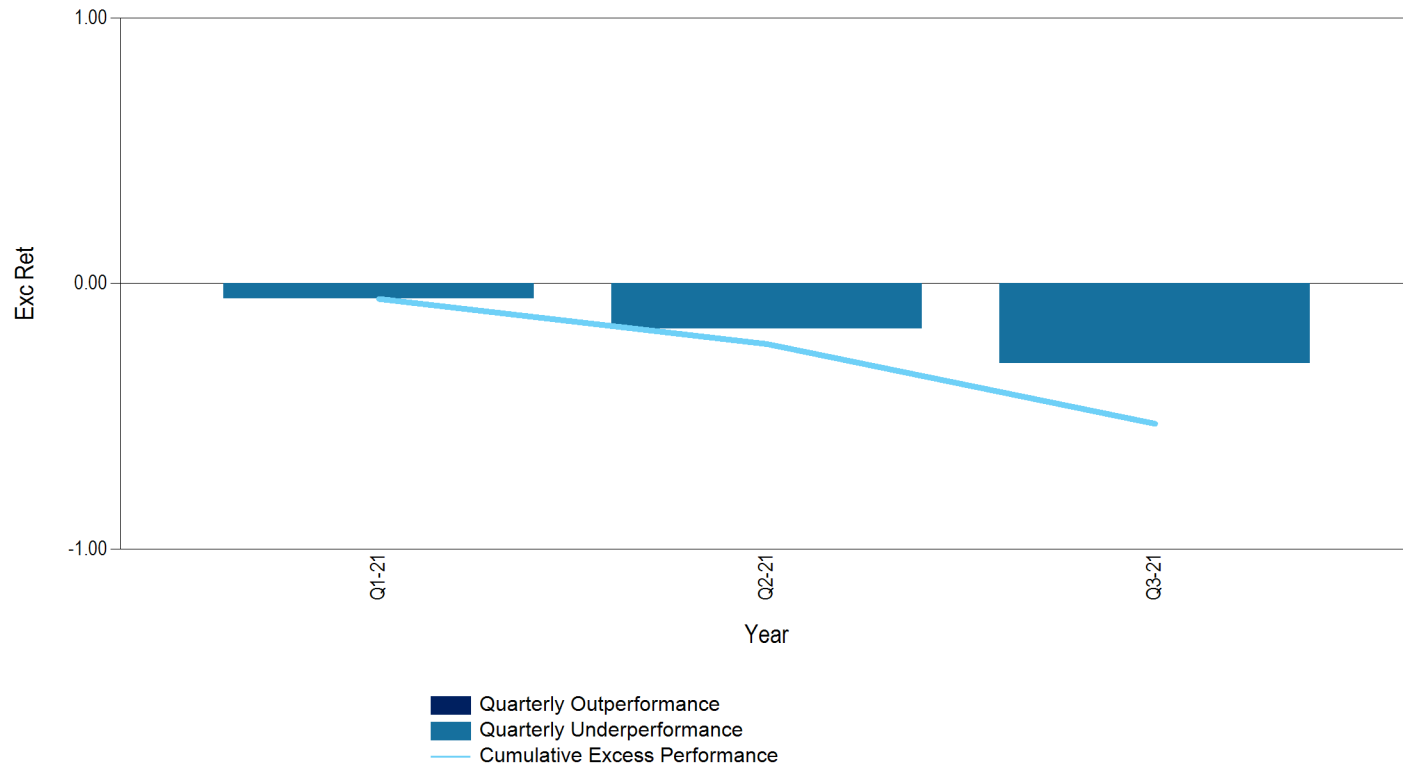
- Bain Capital Senior Loan Fund, LP
- ▲ Credit Suisse Leveraged Lo...
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES & CO. HIGH YIELD

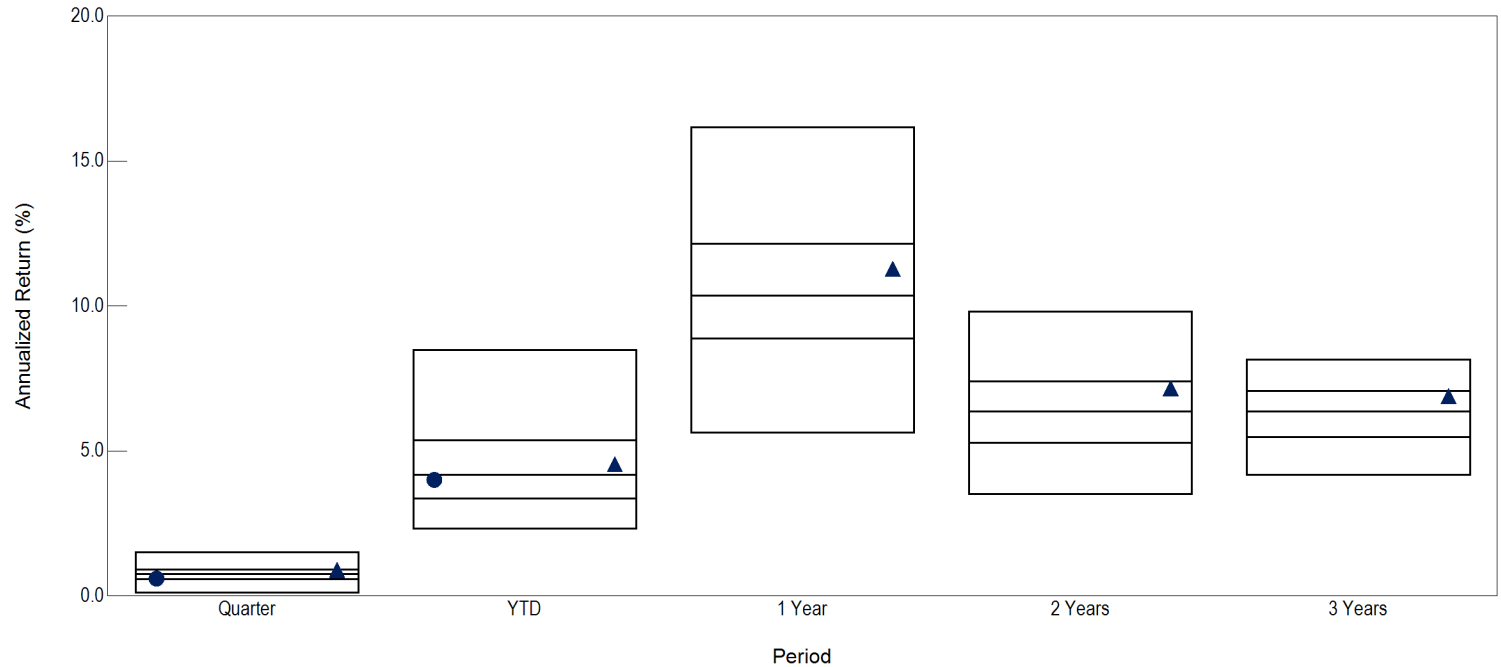
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES & CO. HIGH YIELD

Loomis Sayles & Co. High Yield vs. eV US High Yield Fixed Inc Net



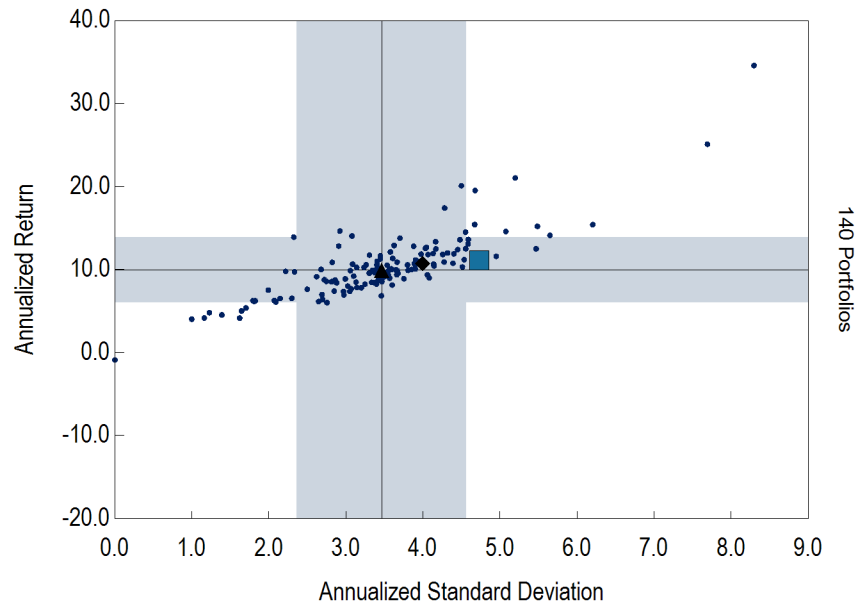
	Return (Rank)									
5th Percentile	1.51		8.48		16.16		9.80		8.14	
25th Percentile	0.93		5.38		12.17		7.42		7.08	
Median	0.77		4.21		10.38		6.39		6.37	
75th Percentile	0.61		3.37		8.89		5.29		5.49	
95th Percentile	0.14		2.34		5.66		3.52		4.19	
# of Portfolios	140		140		140		140		137	
● Loomis Sayles & Co. High Yield	0.59	(76)	4.00	(62)	--	(--)	--	(--)	--	(--)
▲ Bloomberg US High Yield 2% Issuer Cap TR	0.89	(29)	4.54	(42)	11.27	(34)	7.16	(31)	6.89	(30)



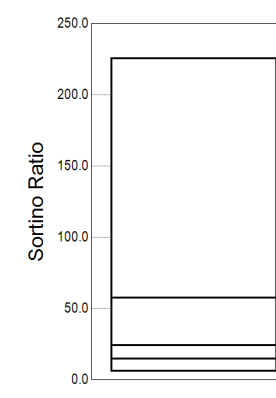
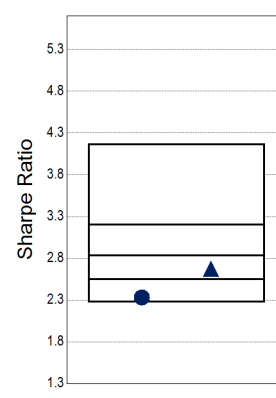
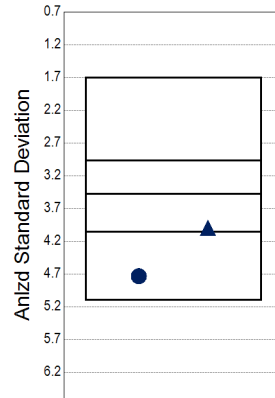
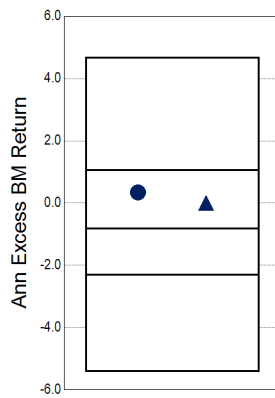
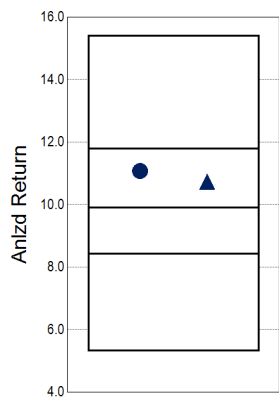
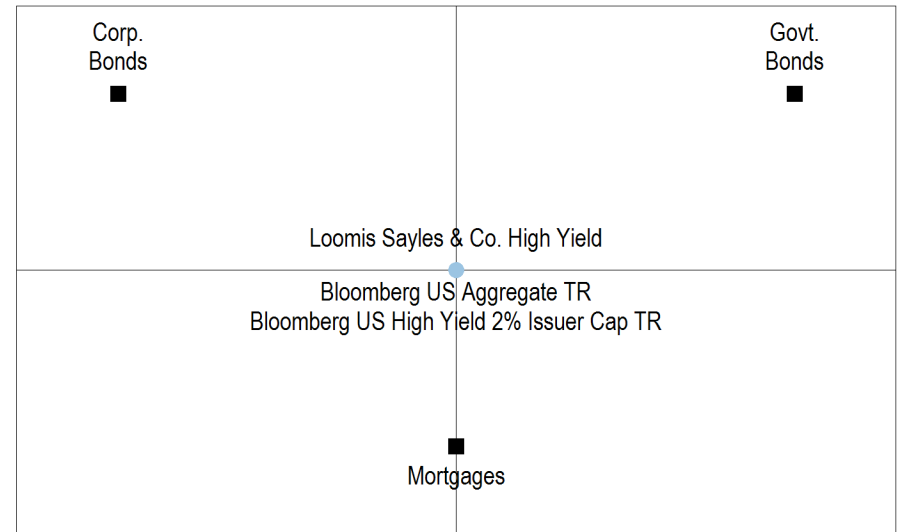
# Los Angeles City Employees' Retirement System

## LOOMIS SAYLES & CO. HIGH YIELD

Since Inception Risk Return



Fixed Income Style Map

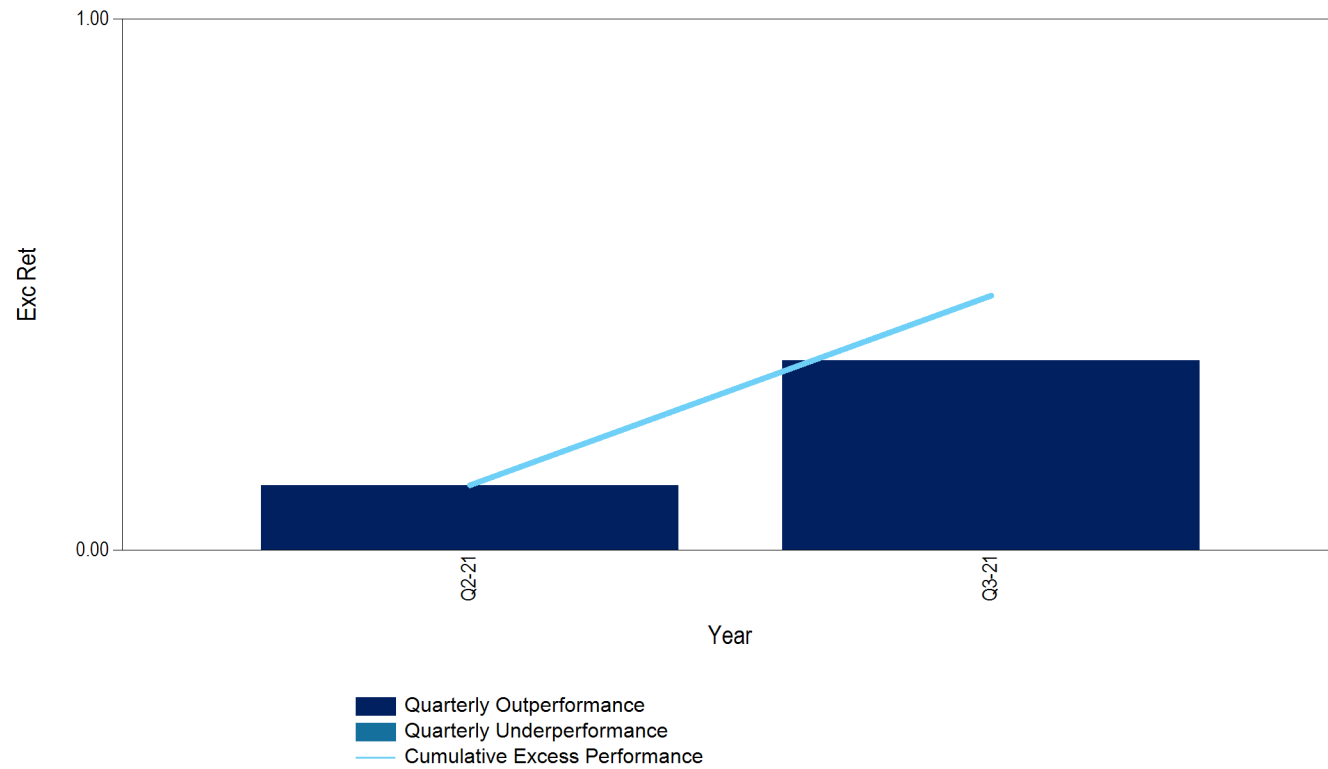


- Loomis Sayles & Co. High Yield
- ▲ Bloomberg US High Yield 2% Issuer Cap TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System PGIM BLENDED

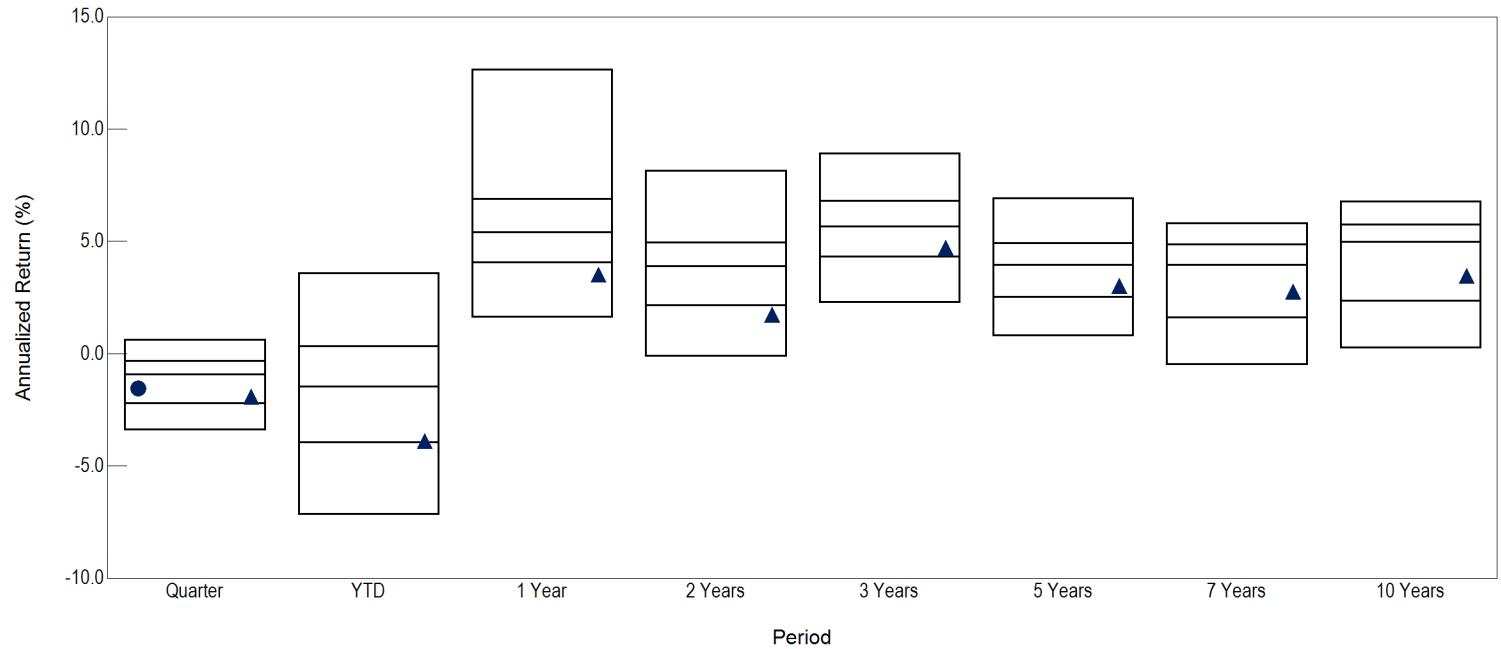
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## PGIM BLENDED

PGIM Blended vs. eV All Emg Mkts Fixed Inc Net



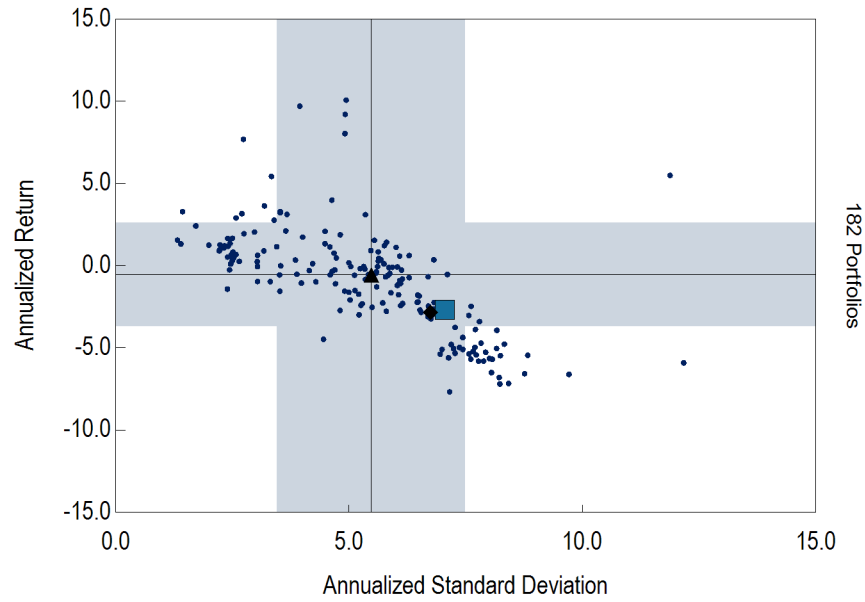
	Return (Rank)															
5th Percentile	0.61	3.59	12.65	8.15	8.91	6.93	5.80	6.79								
25th Percentile	-0.30	0.37	6.93	4.99	6.84	4.96	4.88	5.78								
Median	-0.89	-1.44	5.44	3.92	5.69	3.97	3.99	5.02								
75th Percentile	-2.16	-3.92	4.10	2.20	4.36	2.56	1.63	2.39								
95th Percentile	-3.35	-7.10	1.68	-0.06	2.34	0.84	-0.45	0.30								
# of Portfolios	182	182	182	175	166	152	129	87								
● PGIM Blended	-1.55	(67)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ 50% JPM EMBI Global Diversified/ 50% JPM	-1.91	(71)	-3.88	(75)	3.52	(82)	1.73	(80)	4.70	(67)	3.02	(69)	2.77	(65)	3.47	(66)



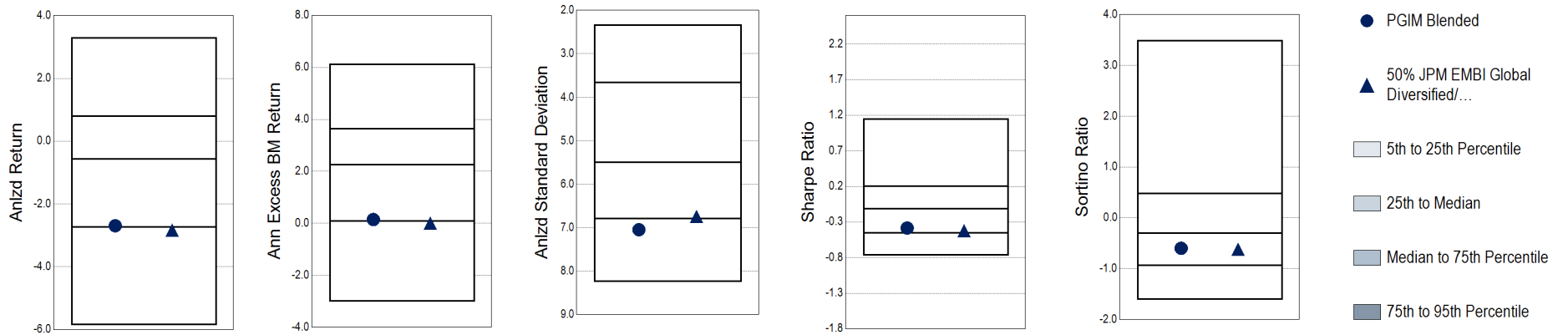
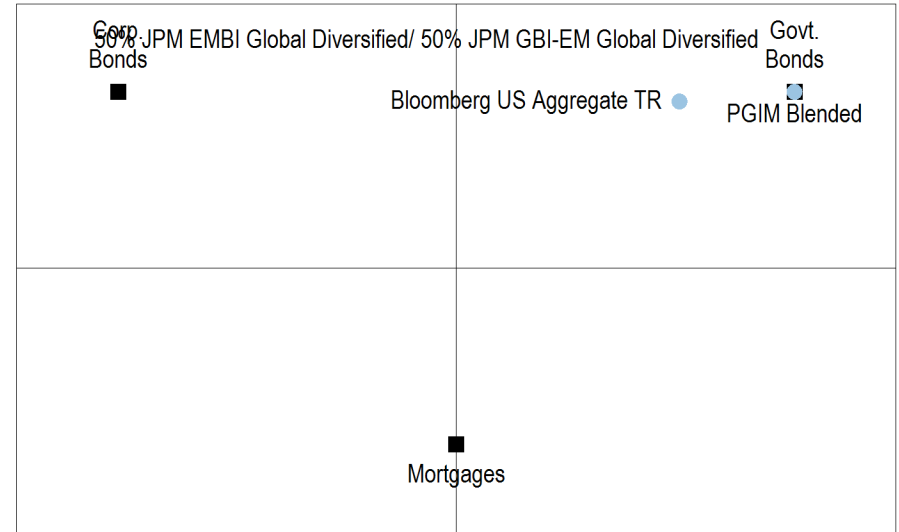
# Los Angeles City Employees' Retirement System

## PGIM BLENDED

Since Inception Risk Return

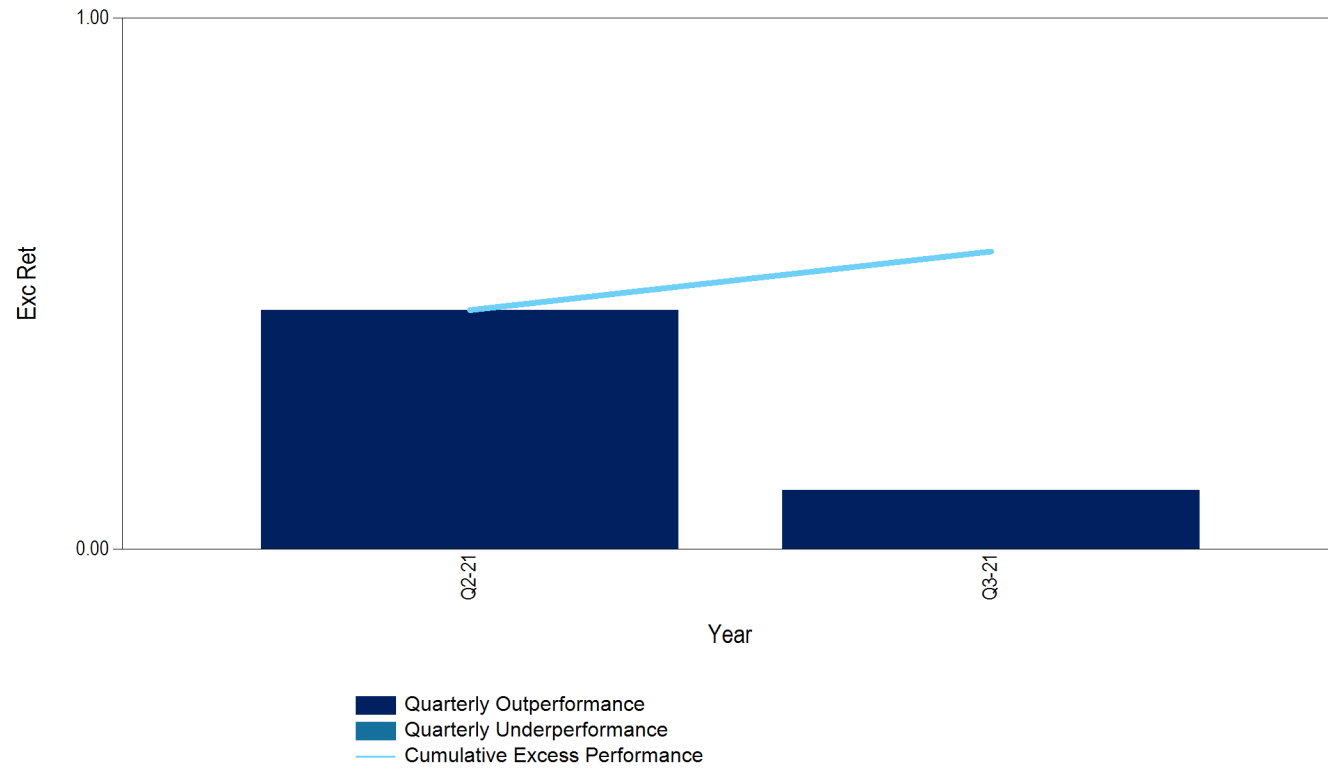


Fixed Income Style Map



# Los Angeles City Employees' Retirement System WELLINGTON

Quarterly and Cumulative Excess Performance

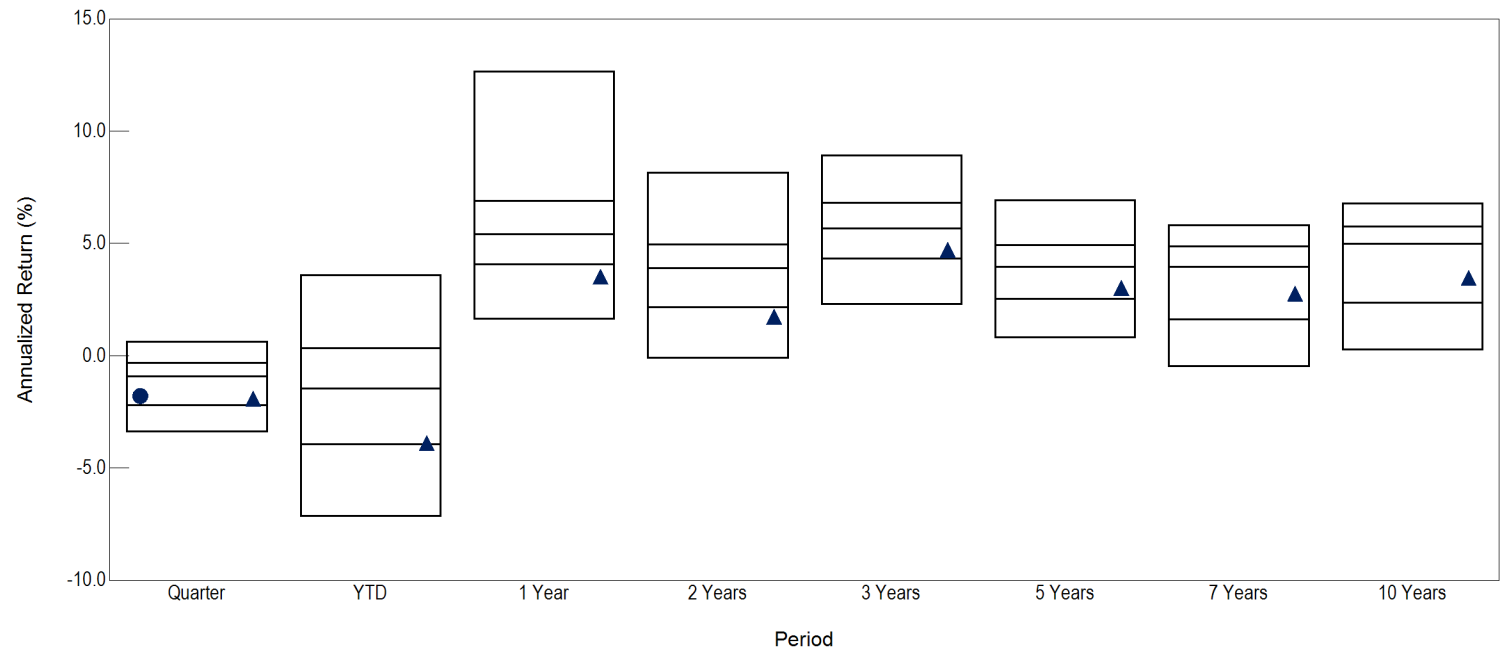




# Los Angeles City Employees' Retirement System

## WELLINGTON

Wellington vs. eV All Emg Mkts Fixed Inc Net



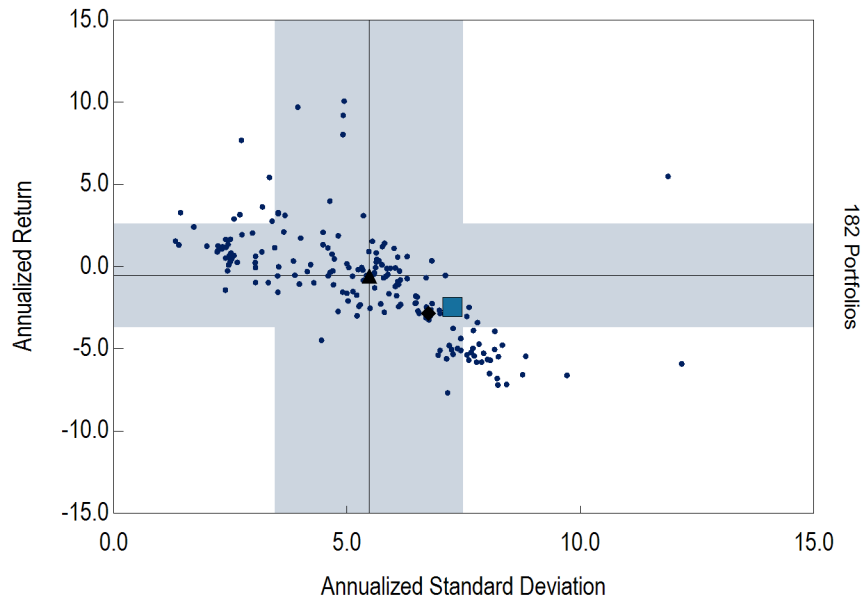
	Return (Rank)															
5th Percentile	0.61	3.59	12.65	8.15	8.91	6.93	5.80	6.79								
25th Percentile	-0.30	0.37	6.93	4.99	6.84	4.96	4.88	5.78								
Median	-0.89	-1.44	5.44	3.92	5.69	3.97	3.99	5.02								
75th Percentile	-2.16	-3.92	4.10	2.20	4.36	2.56	1.63	2.39								
95th Percentile	-3.35	-7.10	1.68	-0.06	2.34	0.84	-0.45	0.30								
# of Portfolios	182	182	182	175	166	152	129	87								
● Wellington	-1.80	(70)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ 50% JPM EMBI Global Diversified/ 50% JPM	-1.91	(71)	-3.88	(75)	3.52	(82)	1.73	(80)	4.70	(67)	3.02	(69)	2.77	(65)	3.47	(66)



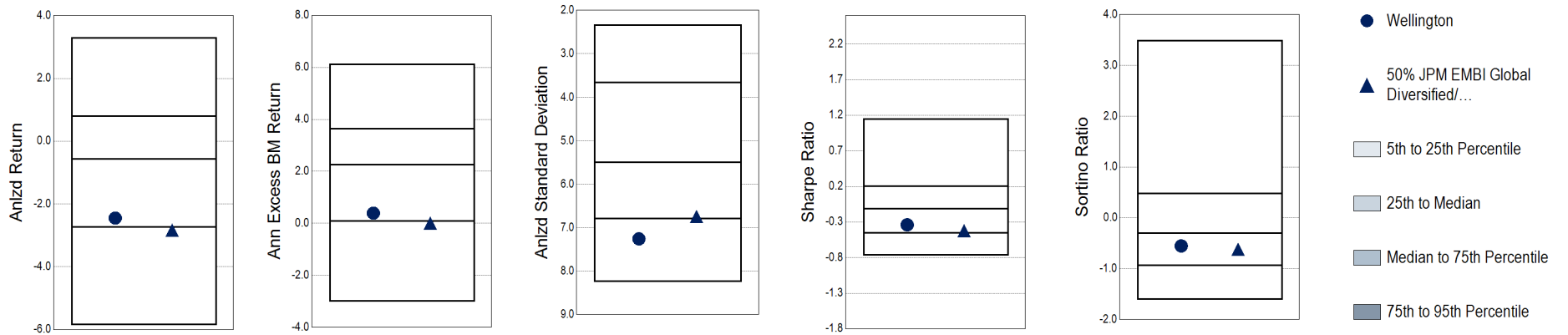
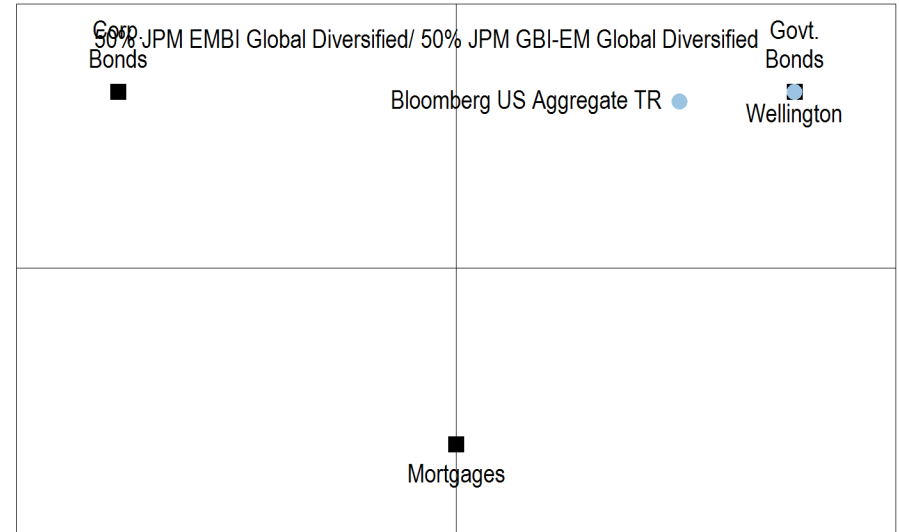
# Los Angeles City Employees' Retirement System

## WELLINGTON

Since Inception Risk Return



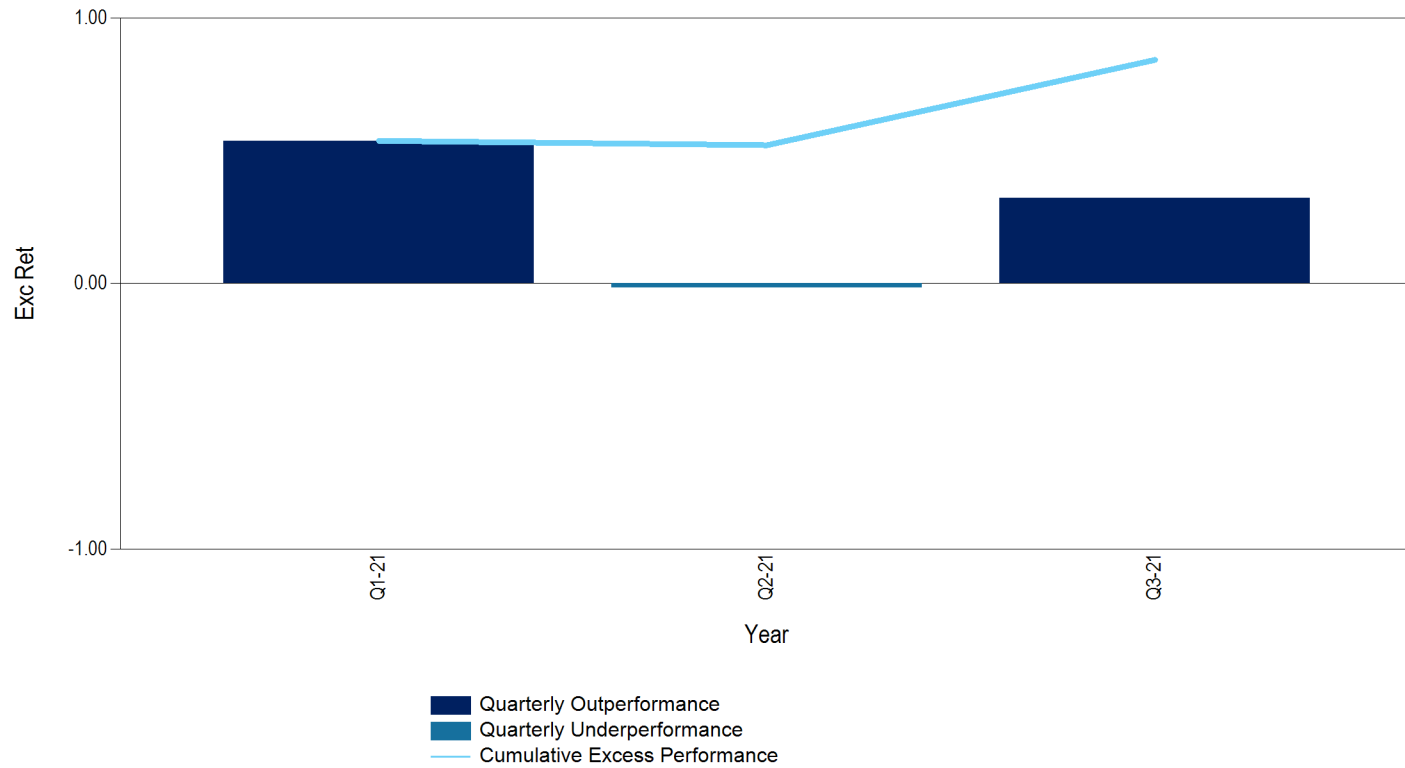
Fixed Income Style Map



# Los Angeles City Employees' Retirement System

## DDJ CAPITAL MANAGEMENT

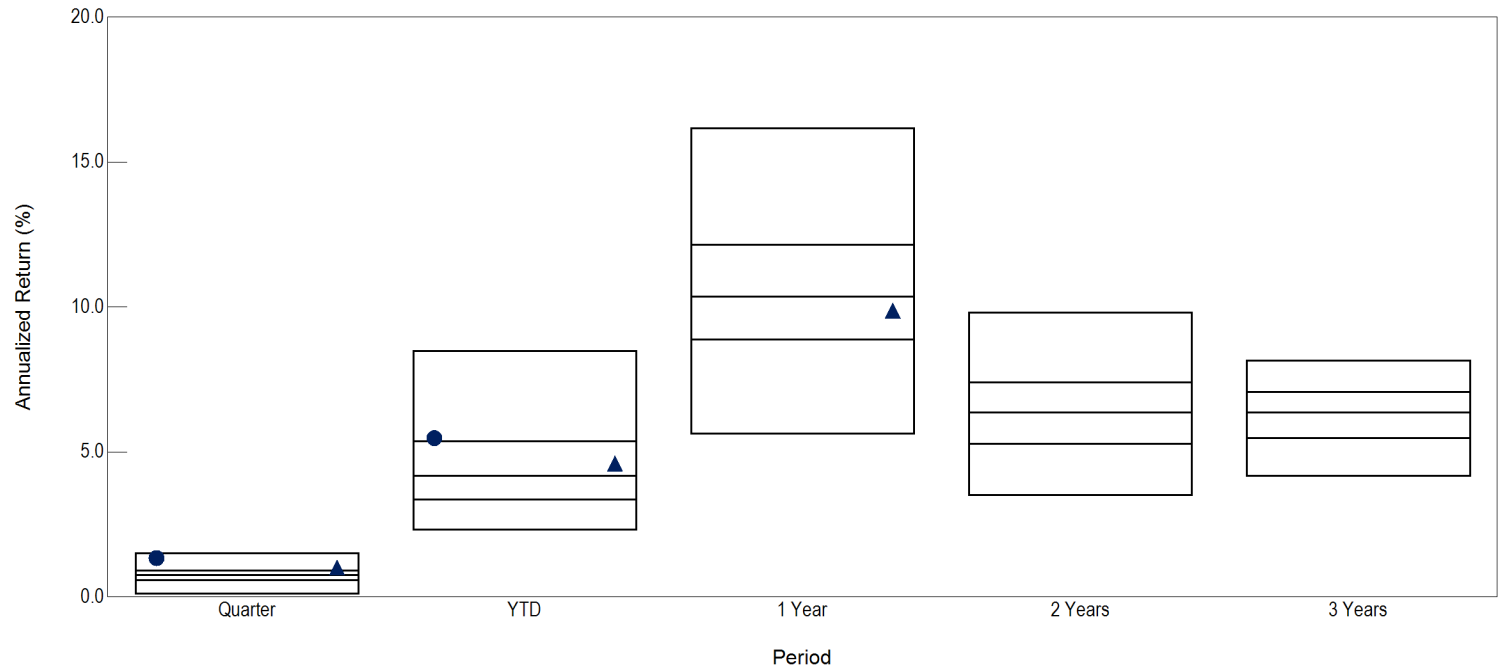
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## DDJ CAPITAL MANAGEMENT

DDJ Capital Management vs. eV US High Yield Fixed Inc Net



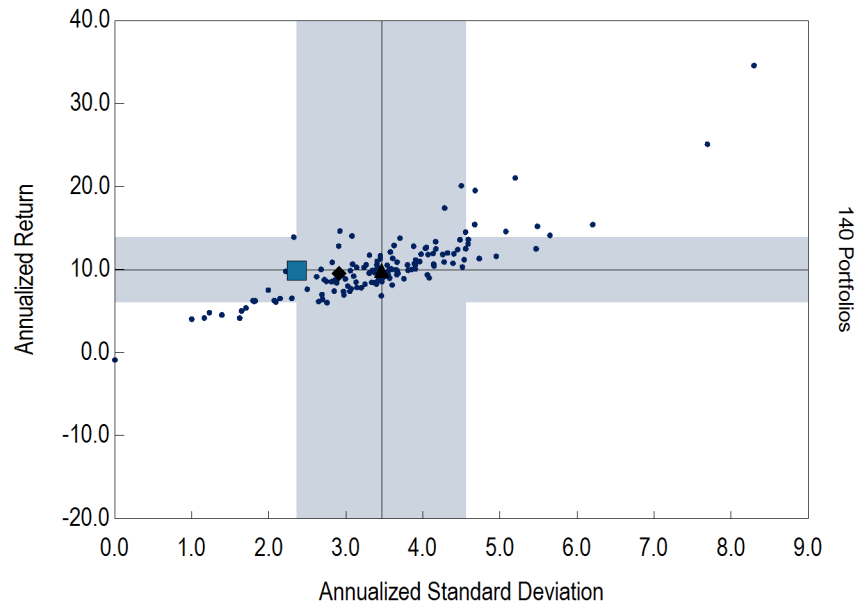
	Return (Rank)									
5th Percentile	1.51		8.48		16.16		9.80		8.14	
25th Percentile	0.93		5.38		12.17		7.42		7.08	
Median	0.77		4.21		10.38		6.39		6.37	
75th Percentile	0.61		3.37		8.89		5.29		5.49	
95th Percentile	0.14		2.34		5.66		3.52		4.19	
# of Portfolios	140		140		140		140		137	
● DDJ Capital Management	1.34	(7)	5.47	(24)	--	(--)	--	(--)	--	(--)
▲ 50% BBgBarc US High Yield 2% Issuer Cap /	1.01	(19)	4.60	(41)	9.87	(62)	--	(--)	--	(--)



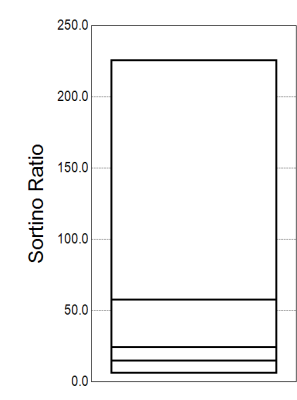
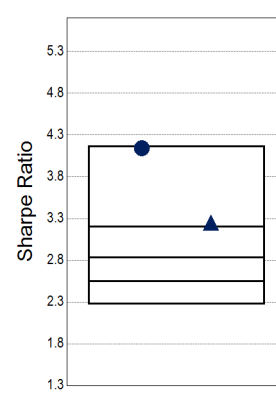
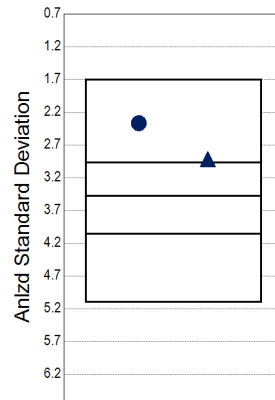
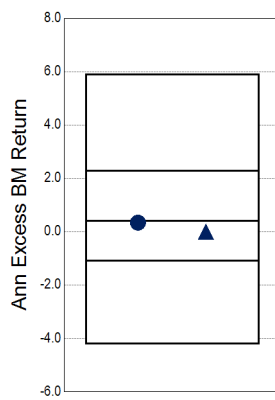
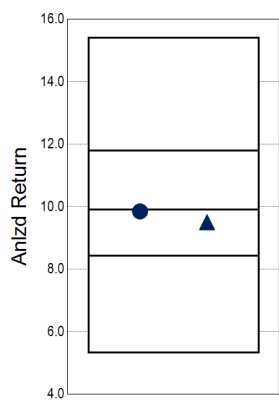
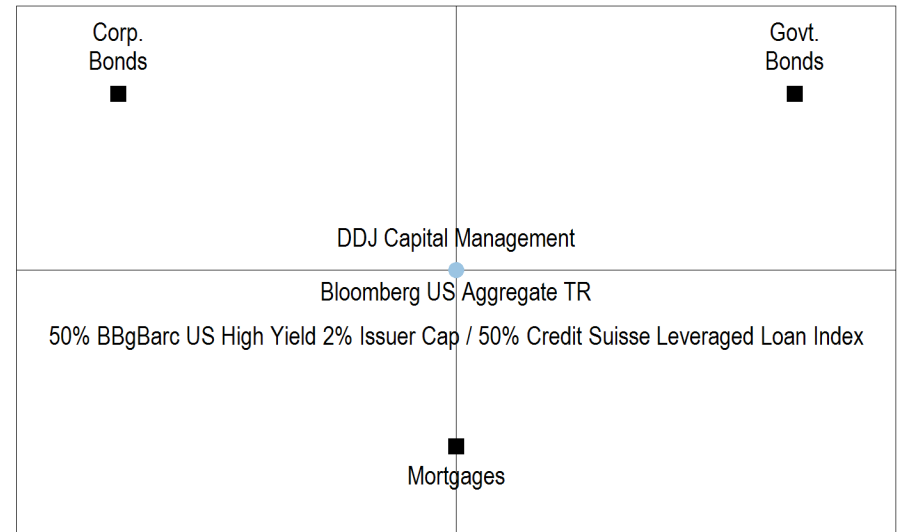
# Los Angeles City Employees' Retirement System

## DDJ CAPITAL MANAGEMENT

Since Inception Risk Return



Fixed Income Style Map



- DDJ Capital Management
- ▲ 50% BBgBarc US High Yield 2% Issuer Cap / 50% Credit Suisse Leveraged Loan Index
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

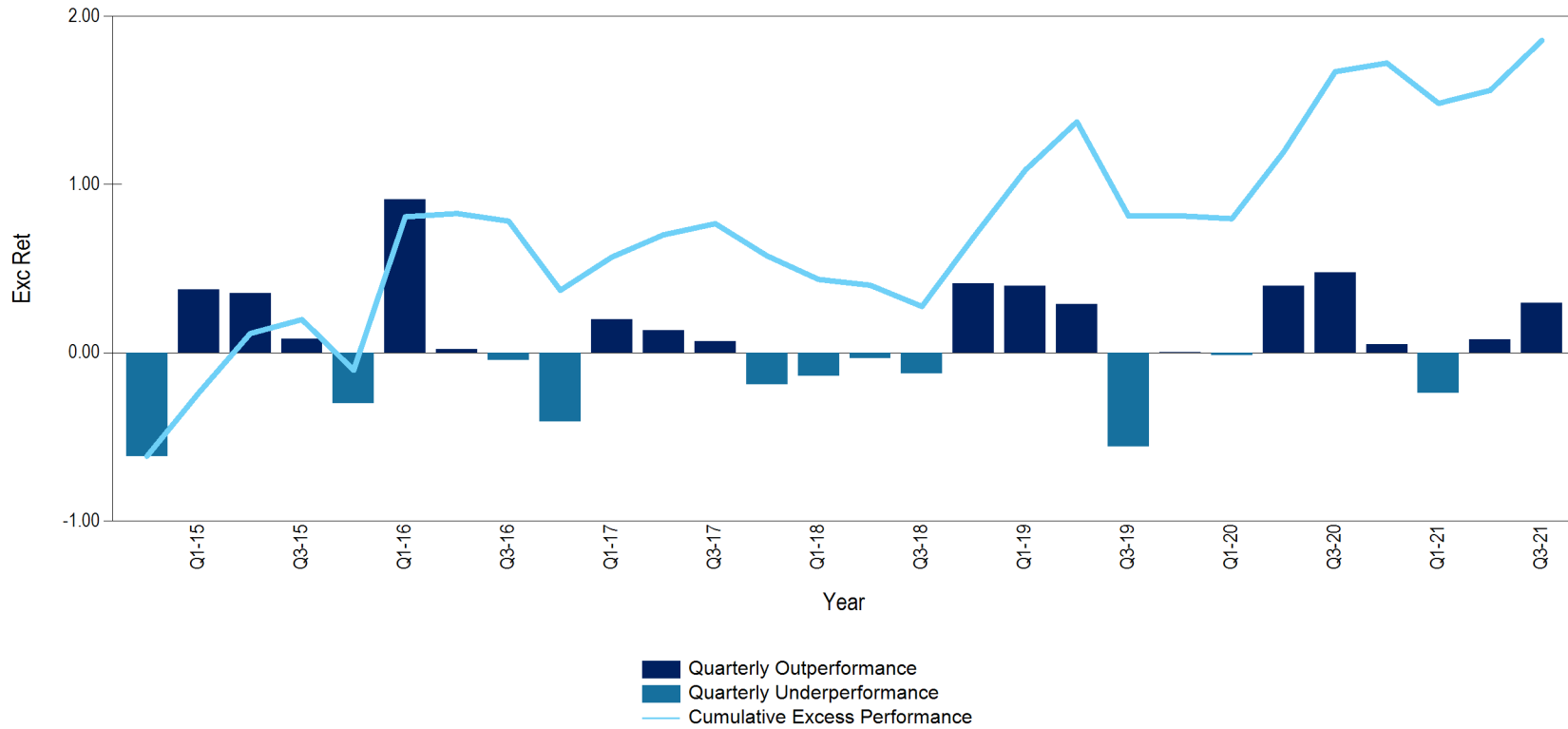




# REAL ASSETS MANAGER PERFORMANCE

# Los Angeles City Employees' Retirement System DFA US TIPS

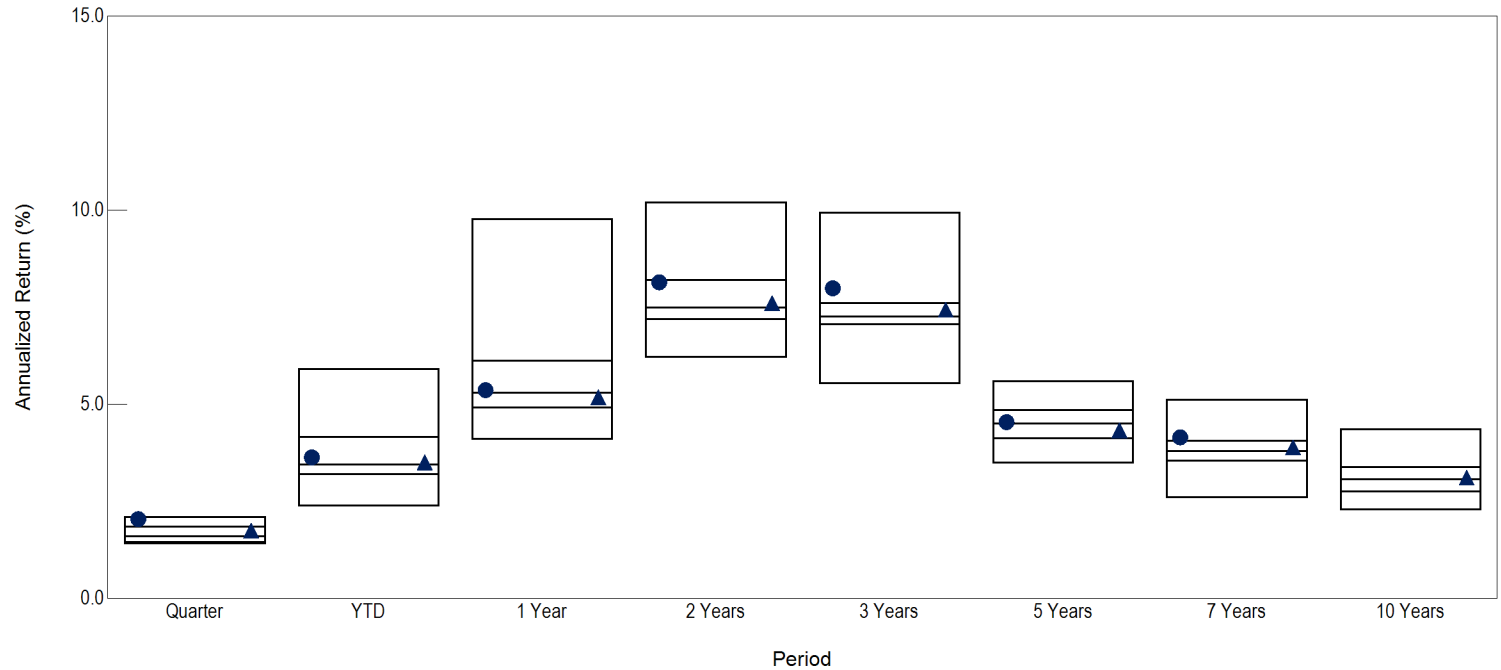
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## DFA US TIPS

DFA US TIPS vs. eV US TIPS / Inflation Fixed Inc Net



	Return (Rank)															
5th Percentile	2.10		5.91		9.78		10.20		9.94		5.59		5.12		4.37	
25th Percentile	1.88		4.18		6.15		8.22		7.63		4.87		4.08		3.41	
Median	1.63		3.47		5.32		7.52		7.28		4.52		3.81		3.09	
75th Percentile	1.47		3.23		4.94		7.22		7.09		4.15		3.57		2.77	
95th Percentile	1.43		2.41		4.13		6.25		5.57		3.53		2.63		2.32	
# of Portfolios	16		16		16		16		16		16		15		13	
● DFA US TIPS	2.05	(6)	3.64	(44)	5.37	(46)	8.15	(32)	7.99	(14)	4.55	(49)	4.15	(24)	--	(--)
▲ Bloomberg US TIPS TR	1.75	(31)	3.51	(47)	5.19	(63)	7.61	(46)	7.45	(33)	4.34	(60)	3.90	(29)	3.12	(47)

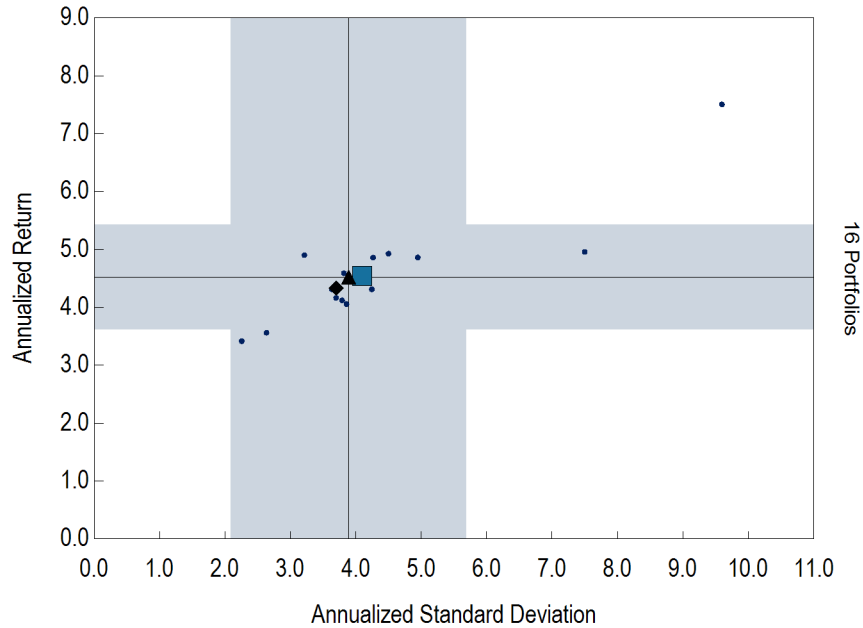




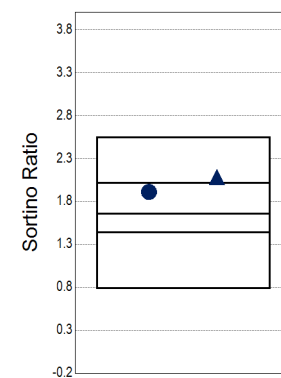
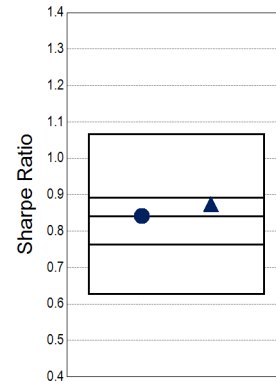
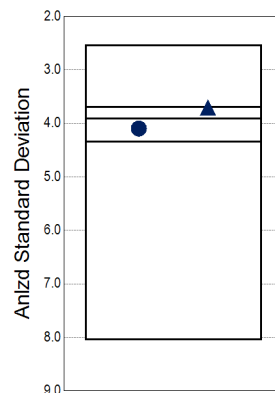
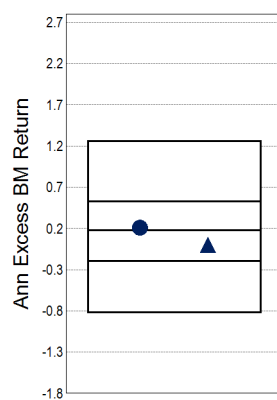
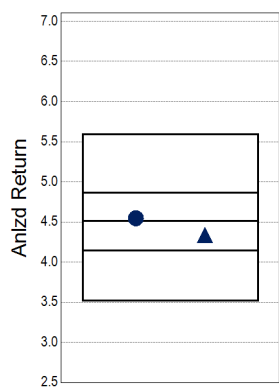
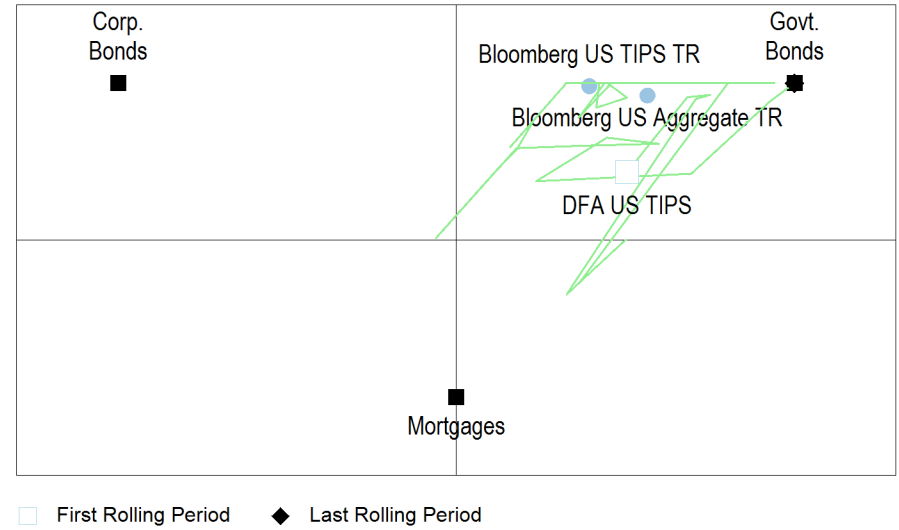
# Los Angeles City Employees' Retirement System

## DFA US TIPS

5 Years Ending September 30, 2021



5 Years Ending September 30, 2021



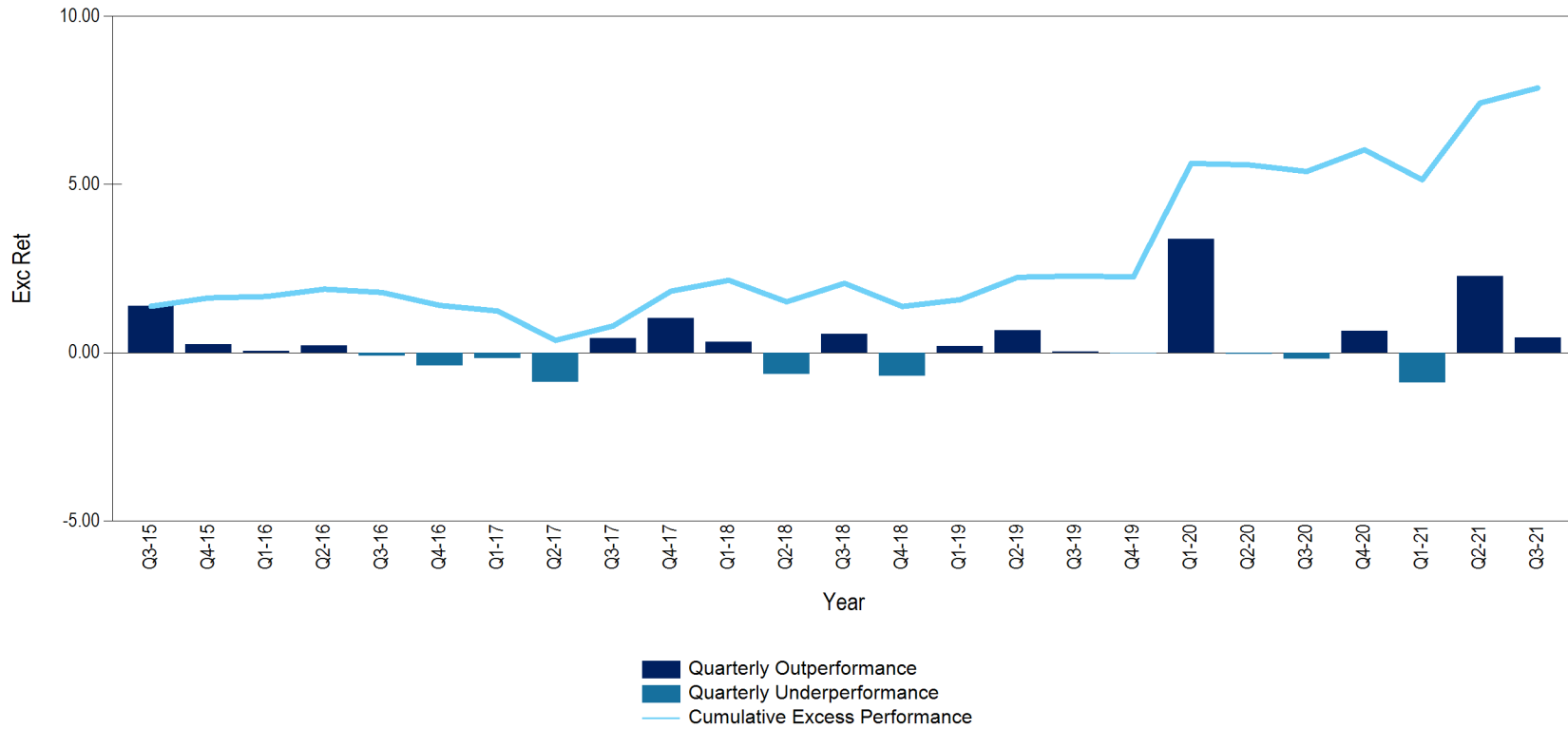
- DFA US TIPS
- ▲ Bloomberg US TIPS TR
- 5th to 25th Percentile
- ▒ 25th to Median
- ▓ Median to 75th Percentile
- 75th to 95th Percentile



# Los Angeles City Employees' Retirement System

## CENTERSQUARE US REAL ESTATE

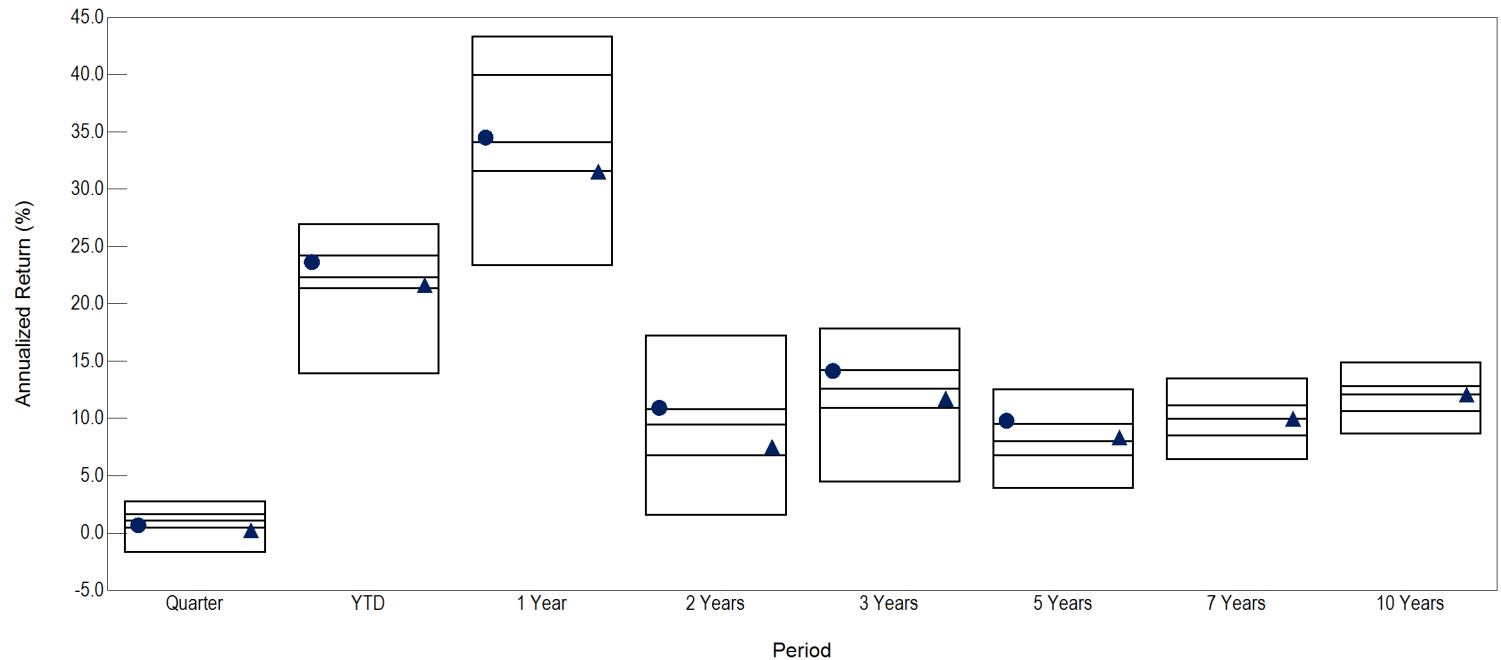
Quarterly and Cumulative Excess Performance



# Los Angeles City Employees' Retirement System

## CENTERSQUARE US REAL ESTATE

CenterSquare US Real Estate vs. eV US REIT Net



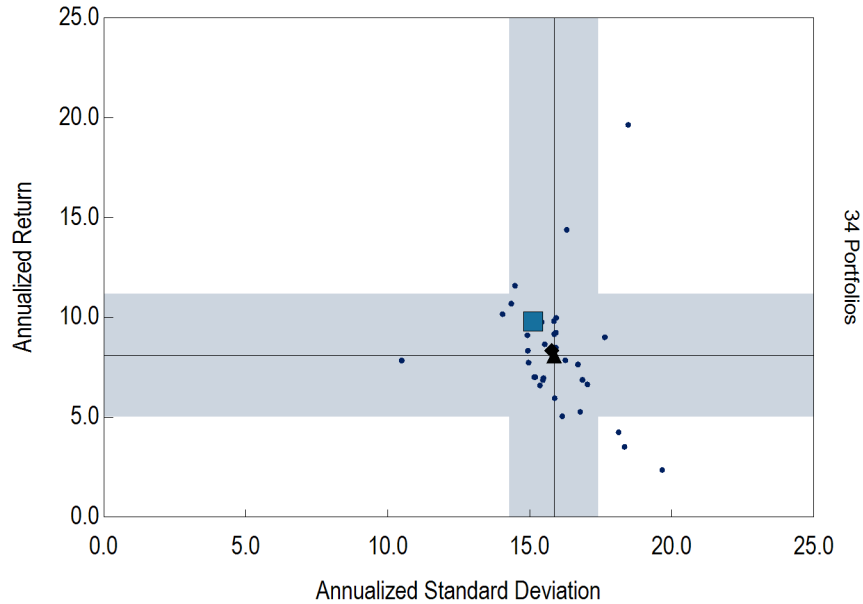
	Return (Rank)															
5th Percentile	2.79	26.97	43.30	17.26	17.85	12.56	13.48	14.89								
25th Percentile	1.70	24.24	40.00	10.88	14.26	9.59	11.21	12.88								
Median	1.16	22.37	34.14	9.54	12.66	8.09	10.04	12.12								
75th Percentile	0.51	21.42	31.62	6.85	10.98	6.87	8.57	10.69								
95th Percentile	-1.57	13.98	23.45	1.62	4.56	4.00	6.50	8.74								
# of Portfolios	38	38	38	37	36	34	30	27								
● CenterSquare US Real Estate	0.68	(72)	23.63	(34)	34.50	(49)	10.93	(25)	14.14	(27)	9.80	(20)	--	(--)	--	(--)
▲ FTSE NAREIT All Equity REIT	0.23	(84)	21.63	(65)	31.53	(76)	7.50	(72)	11.73	(65)	8.33	(49)	9.98	(52)	12.09	(53)



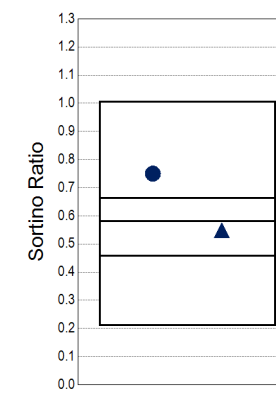
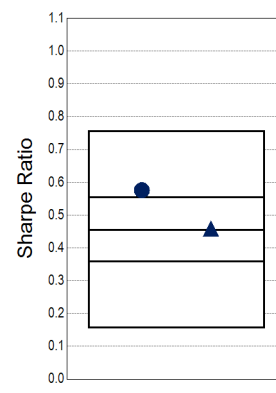
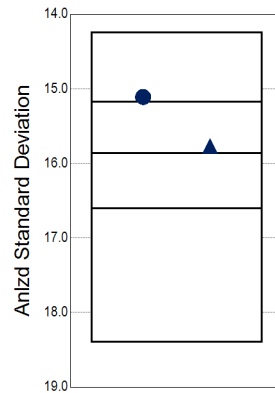
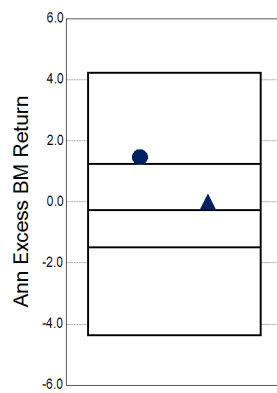
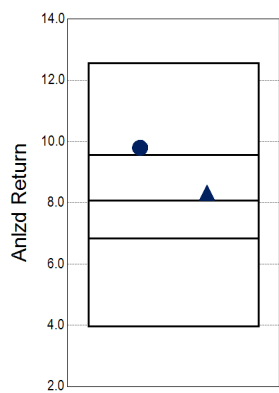
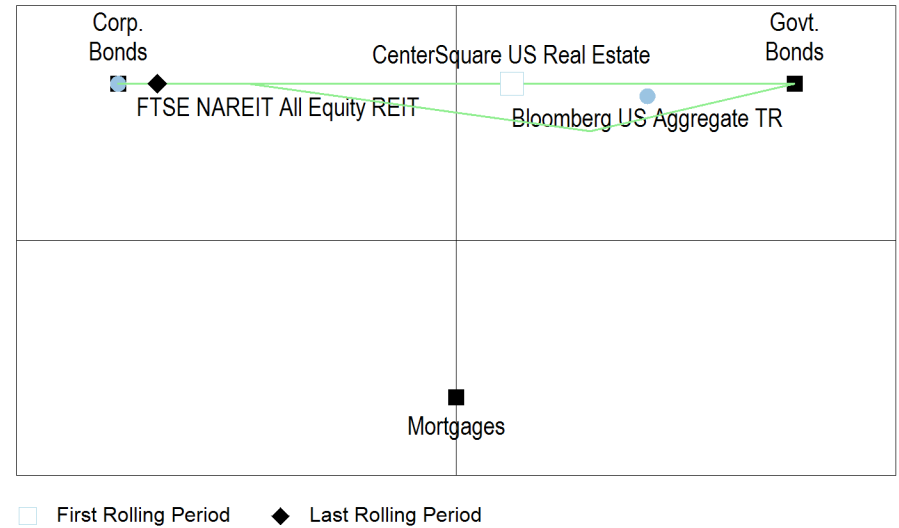
# Los Angeles City Employees' Retirement System

## CENTERSQUARE US REAL ESTATE

5 Years Ending September 30, 2021



5 Years Ending September 30, 2021



- CenterSquare US Real Estate
- ▲ FTSE NAREIT All Equity REIT
- 5th to 25th Percentile
- ▒ 25th to Median
- ▓ Median to 75th Percentile
- 75th to 95th Percentile





# DEFINITIONS

# POLICY INDEX DEFINITIONS

**Policy Index: Current (Interim policy composition)** 22.5% Russell 3000 Index, 27% MSCI ACWI ex USA Net Index, 16.75% Bbg Barclays U.S. Aggregate Bond Index, 7.25% Credit Opportunities Blend, 12% Real Assets Blend, 13.5% Private Equity Blend, 1% Citi 3 Month T-Bill Index

**U.S. Equity Blend:** July 1, 2011 - Current: Russell 3000 Index; September 30, 1994 - December 31, 1999 S&P 500 Index 33.75, Russell 1000 Value Index 35%, Russell 1000 Growth 12.5%, Russell 2000 Value 12.5%, Russell 2000 Growth 6.25%

**Core Fixed Income Blend:** July 1, 2013 – Current: Bbg Barclays U.S. Aggregate Bond Index

**Credit Opportunities Blend:** 20.7% Bloomberg US High Yield 2% Issuer Capped Index, 20.7% Credit Suisse Leveraged Loan Index, 55% Blended Emerging Markets Debt Blend, 3.6% Credit Suisse Leveraged Loan Index One Quarter Lagged

**Emerging Markets Debt Blend:** 50% JPM EMBI Global Diversified, 50% JPM GBI-EM Global Diversified

**Real Assets Blend:** 41.67% Bloomberg US TIPS Index, 25% FTSE NAREIT All Equity Index, 33.33% Real Estate Blend

**Public Real Assets Blend:** 62.5% Bloomberg US TIPS Index, 37.5% FTSE NAREIT All Equity Index

**Real Estate Blend:** July 1, 2014 - Current NCREIF ODCE + 0.80%; July 1, 2012 - June 30, 2014 NCREIF Property Index Lagged +1%; October 1, 1994 - June 30, 2012 NCREIF Property Index Lagged

**Private Equity Blend:** February 1, 2012 – current: Russell 3000 + 3%; Inception – January 31, 2012: Russell 3000 + 4%

Note: See Investment Policy for a full description of the indices listed.



# POLICY INDEX DEFINITIONS

INTERIM POLICY TARGETS ADOPTED ON SEPTEMBER 14, 2021

Asset Class	Policy Target %	Interim Policy Targets				
		2021	2022	2023	2024	2025
U.S. Equity	21.00%	22.50%	22.00%	21.50%	21.40%	21.00%
Non-U.S. Equity	26.00%	27.00%	27.00%	26.50%	26.10%	26.00%
Private Equity	16.00%	13.50%	14.00%	15.00%	15.50%	16.00%
Core Fixed Income	11.25%	16.75%	16.00%	14.75%	13.25%	11.25%
Credit Opportunities	12.75%	7.25%	8.00%	9.25%	10.75%	12.75%
Public Real Assets	5.00%	8.00%	7.50%	7.00%	6.00%	5.00%
Real Estate	7.00%	4.00%	4.50%	5.00%	6.00%	7.00%
Cash	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%



# GLOSSARY OF INVESTMENT TERMINOLOGY

- **# Of Portfolios/Observations<sup>1</sup>**
  - The total number of data points that make up a universe or sample.
- **Allocation Index<sup>3</sup>**
  - The Allocation Index measures the value added to (or subtracted from) each portfolio by active management. It is calculated monthly: The portfolio weight allocated to each category from the prior month-end is multiplied by a specified market index return.
- **Asset Allocation Effect<sup>2</sup>**
  - Measures an investment manager’s ability to effectively allocate their portfolio’s assets to various sectors. The allocation effect determines whether the overweighting or underweighting of sectors relative to a benchmark contributes positively or negatively to the overall portfolio return. Positive allocation occurs when the portfolio is over weighted in a sector that outperforms the benchmark and underweighted in a sector that underperforms the benchmark. Negative allocation occurs when the portfolio is over weighted in a sector that underperforms the benchmark and under weighted in a sector that outperforms the benchmark.
- **Agency Bonds (Agencies)<sup>3</sup>**
  - The full faith and credit of the United States government is normally not pledged to payment of principal and interest on the majority of government agencies issuing these bonds, with maturities of up to ten years. Their yields, therefore, are normally higher than government and their marketability is good, thereby qualifying them as a low risk-high liquidity type of investment. They are eligible as security for advances to the member banks by the Federal Reserve, which attests to their standing.
- **Asset Backed Securities (ABS)<sup>3</sup>**
  - Bonds which are similar to mortgage-backed securities but are collateralized by assets other than mortgages; commonly backed by credit card receivables, auto loans, or other types of consumer financing.
- **Attribution<sup>3</sup>**
  - Attribution is an analytical technique used to evaluate the performance of a portfolio relative to a benchmark. A proper attribution highlights where value was added or subtracted as a result of the manager’s decisions.
- **Average Effective Maturity<sup>4</sup>**
  - For a single bond, it is a measure of maturity that takes into account the possibility that a bond might be called back to the issuer.  
  
For a portfolio of bonds, average effective maturity is the weighted average of the maturities of the underlying bonds. The measure is computed by weighing each bond's maturity by its market value with respect to the portfolio and the likelihood of any of the bonds being called. In a pool of mortgages, this would also account for the likelihood of prepayments on the mortgages.
- **Batting Average<sup>1</sup>**
  - A measurement representing an investment manager's history in surpassing an index.  
*Formula: Divide the number of days (or months, quarters, etc.) in which the manager beat or matched the index by the total number of days (or months, quarters, etc.) in the time period, and multiply that factor by 100.*
- **Brinson Fachler (BF) Attribution<sup>1</sup>**
  - The BF methodology is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio’s underlying performance. The main advantage of the BF methodology is that rather than using the overall return of the benchmark, it goes a level deeper than BHB and measures whether the benchmark sector, country, etc. outperformed/or underperformed the overall benchmark.

Source: <sup>1</sup>InvestorForce, <sup>2</sup>Interaction Effect Performance Attribution, <sup>3</sup>NEPC, LLC, <sup>4</sup>Investopedia, <sup>5</sup>Hedgeco.net



# GLOSSARY OF INVESTMENT TERMINOLOGY

- **Brinson Hood Beebower (BHB) Attribution<sup>1</sup>**
  - The BHB methodology shows that excess return must be equal to the sum of all other factors (i.e., allocation effect, selection effect, interaction effect, etc.). The advantage to using the BHB methodology is that it is a highly accepted industry standard for calculating the allocation, selection, and interaction effects within a portfolio that collectively explains a portfolio's underlying performance.
- **Corporate Bond (Corp)<sup>4</sup>**
  - A debt security issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations. In some cases, the company's physical assets may be used as collateral for bonds.
- **Correlation<sup>1</sup>**
  - A range of statistical relationships between two or more random variables or observed data values. A correlation is a single number that describes the degree of relationship between variables.
- **Coupon<sup>4</sup>**
  - The interest rate stated on a bond when it is issued. The coupon is typically paid semiannually. This is also referred to as the "coupon rate" or "coupon percent rate."
- **Currency Effect<sup>1</sup>**
  - The effect that changes in currency exchange rates over time affect excess performance.
- **Derivative Instrument<sup>3</sup>**
  - A financial obligation that derives its precise value from the value of one or more other instruments (or assets) at the same point of time. For example, the relationship between the value of an S&P 500 futures contract (the derivative instrument in this case) is determined by the value of the S&P 500 Index and the value of a U.S. Treasury bill that matures at the expiration of the futures contract.
- **Downside Deviation<sup>1</sup>**
  - The standard deviation of negative return or the measure of downside risk focusing on the standard deviation of negative returns.  
*Formula: Annualized Standard Deviation (Fund Return - Average Fund Return) where average fund return is greater than individual fund returns, monthly or quarterly.*
- **Duration<sup>3</sup>**
  - Duration is a measure of interest rate risk. The greater the duration of a bond, or a portfolio of bonds, the greater its price volatility will be in response to a change in interest rates. A bond's duration is inversely related to interest rates and directly related to time to maturity.
- **Equity/Debt/Cash Ratio<sup>1</sup>**
  - The percentage of an investment or portfolio that is in Equity, Debt, and/or Cash (i.e. a 7/89/4 ratio represents an investment that is made up of 7% Equity, 89% Debt, and 4% Cash).
- **Foreign Bond<sup>3</sup>**
  - A bond that is issued in a domestic market by a foreign entity, in the domestic market's currency. A foreign bond is most often issued by a foreign firm to raise capital in a domestic market that would be most interested in purchasing the firm's debt. For foreign firms doing a large amount of business in the domestic market, issuing foreign bonds is a common practice.
- **Hard Hurdle<sup>5</sup>**
  - A rate of return that, once beaten, allows a fund manager to charge a performance fee on returns above the specified hurdle rate.
- **High-Water Mark<sup>4</sup>**
  - The highest value that an investment fund/account has reached. This term is often used in the context of fund manager compensation, which is performance-based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.

Source: <sup>1</sup>InvestorForce, <sup>2</sup>Interaction Effect Performance Attribution, <sup>3</sup>NEPC, LLC, <sup>4</sup>Investopedia, <sup>5</sup>Hedgeco.net

# GLOSSARY OF INVESTMENT TERMINOLOGY

- **High-Water Mark<sup>4</sup>**
  - The highest value that an investment fund/account has reached. This term is often used in the context of fund manager compensation, which is performance-based. Some performance-based fees only get paid when fund performance exceeds the high-water mark. The high-water mark ensures that the manager does not get paid large sums for poor performance.
- **Hurdle Rate<sup>4</sup>**
  - The minimum rate of return on an investment required for a manager to collect incentive fees from the investor, which is usually tied to a benchmark.
- **Interaction Effect<sup>2</sup>**
  - The Interaction Effect measures the combined impact of an investment manager's selection and allocation decisions within a sector. For example, if an investment manager had superior selection and overweighted that particular sector, the interaction effect is positive. If an investment manager had superior selection, but underweighted that sector, the interaction effect is negative. In this case, the investment manager did not take advantage of the superior selection by allocating more assets to that sector. Since many investment managers consider the interaction effect to be part of the selection or the allocation, it is often combined with either effect.
- **Median<sup>3</sup>**
  - The value that exceeds one-half of the values in a population and that is exceeded by one-half of the values. The median has a percentile rank of 50.
- **Modified Duration<sup>3</sup>**
  - The percentage change in the price of a fixed income security that results from a change in yield.
- **Mortgage Backed Securities (MBS)<sup>3</sup>**
  - Bonds which are a general obligation of the issuing institution but are also collateralized by a pool of mortgages.
- **Municipal Bond (Muni)<sup>4</sup>**
  - A debt security issued by a state, municipality or county to finance its capital expenditures.
- **Net Investment Change<sup>1</sup>**
  - The change in an investment after accounting for all Net Cash Flows.
- **Performance Fee<sup>4</sup>**
  - A payment made to a fund manager for generating positive returns. The performance fee is generally calculated as a percentage of investment profits, often both realized and unrealized.
- **Policy Index<sup>3</sup>**
  - A custom benchmark designed to indicate the returns that a passive investor would earn by consistently following the asset allocation targets set forth in the investment policy statement.
- **Price to Book (P/B)<sup>4</sup>**
  - A ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share, also known as the "price-equity ratio".
- **Price to Earnings (P/E)<sup>3</sup>**
  - The weighted equity P/E is based on current price and trailing 12 months earnings per share (EPS).
- **Price to Sales (P/S)<sup>4</sup>**
  - A ratio for valuing a stock relative to its own past performance, other companies, or the market itself. Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.
- **Quartile<sup>3</sup>**
  - One of four segments of a distribution. The top quartile consists of observations that rank from 1 to 25, the second quartile consists of observations that rank between 25 and 50, etc.

Source: <sup>1</sup>InvestorForce, <sup>2</sup>Interaction Effect Performance Attribution, <sup>3</sup>NEPC, LLC, <sup>4</sup>Investopedia, <sup>5</sup>Hedgeco.net



# GLOSSARY OF INVESTMENT TERMINOLOGY

- **Rank<sup>3</sup>**
  - The relative position of a single observation in a larger population. Universe rankings range from 1 to 100, with 1 being the best and 100 the worst.
- **Return on Equity (ROE)<sup>4</sup>**
  - The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.
- **Selection (or Manager) Effect<sup>2</sup>**
  - Measures the investment manager's ability to select securities within a given sector relative to a benchmark. The over or underperformance of the portfolio is weighted by the benchmark weight, therefore, selection is not affected by the manager's allocation to the sector. The weight of the sector in the portfolio determines the size of the effect: The larger the sector, the larger the effect, positive or negative.
- **Soft Hurdle<sup>5</sup>**
  - A rate of return that, once beaten, allows a fund manager to charge a performance fee based on the entire annualized return.
- **Tiered Fee<sup>1</sup>**
  - A fee structure that is paid to fund managers based on the size of the investment (i.e. 1.00% fee on the first \$10M invested, 0.90% on the next \$10M, and 0.80% on the remaining balance).
- **Total Effect<sup>2</sup>**
  - The active management (total) effect is the sum of the selection, allocation, and interaction effects. It is also the difference between the total portfolio return and the total benchmark return. You can use the active management effect to determine the amount the investment manager has added to a portfolio's return.
- **Total Return<sup>1</sup>**
  - The actual rate of return of an investment over a specified time period. Total return includes interest, capital gains, dividends, and distributions realized over the time period.
- **Universe<sup>3</sup>**
  - The list of all assets eligible for inclusion in a portfolio, or group of portfolios eligible for inclusion in a distribution.
- **Upside Deviation<sup>1</sup>**
  - Standard Deviation of Positive Returns
- **Weighted Average Market Cap.<sup>4</sup>**
  - A stock market index weighted by the market capitalization of each stock in the index. In such a weighting scheme, larger companies account for a greater portion of the index. Most indexes are constructed in this manner, with the best example being the S&P 500.
- **Yield (%)<sup>3</sup>**
  - The current yield of a security is the current indicated annual dividend rate divided by current price.
- **Yield to Maturity<sup>3</sup>**
  - The discount rate that equates the present value of cash flows, both principal and interest, to market price.



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A “since inception” return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv

